The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOL. XLVI. CHICAGO, ILLINOIS, APRIL 21, 1906. No. 16.

Original Articles

MALARIAL INFECTION IN CERTAIN NATIVE VILLAGES OF THE CANAL ZONE.

ARTHUR I. KENDALL, PH.D.

Acting Chief, Board of Health Laboratory, Isthmian Canal Commission.

PANAMA.

When a body of men is sent to occupy a foreign country for any purpose, one of the first tasks of the sanitary authorities is to investigate and take precautions against the prevailing infectious diseases. The American occupancy of certain portions of the Isthmus of Panama was inaugurated by an investigation of the malarial fevers, for which this region has long been famous, and the results of this investigation form the basis of this paper.

In October, 1904, I was detailed to visit certain native villages, examine as many natives as might be necessary to insure accuracy of results, and to report on the percentage of inhabitants whose peripheral circulation harbored malarial parasites. The object of this work was not so much to determine the actual number of sick *per se*, but to include in the statistics indiscriminately the population of a certain area, noting just what proportion of the people harbored malarial organisms irrespective of symptoms. Obviously, after selecting the section to be examined, the best and most satisfactory method of procedure would be either to go from house to house personally or to send messengers armed with the necessary authority to compel the natives to report in person at a convenient station. In either event care must be taken to insure the presence of all members of each household at the time of examination; this necessitated the co-operation of the alcalde in each town, together with men who were personally familiar with the inhabitants. The local police aided much in this work, coming in contact with each and every native as they did; they were able to furnish lists of people living in a certain district and to keep them in town for examination.

Both the method of making house-to-house visits and that of requiring natives to report to a definite station was tried; in the former case it was found necessary to take houses irregularly, because the natives soon learned to anticipate our arrival and leave a day or two before their turn came, returning when their particular district had been worked up. In one case the population of a house at the time of our arrival was three; two days later it had risen to eight; the cause of this increase was a sense of security on the part of the natives that they would not be again troubled, together with an unexpected visit on the part of the police officer detailed to collect the inhabitants of that place for further examination. The plan of sending out a messenger was fully as satisfactory from the point of view of obtaining natives for our work, and saved much time that previously had been lost going from house to house.

By keeping track of the houses examined it was possible to obtain results which were derived from practically the whole population of the desired district, and the returns showed that in this respect the data on which the results are based were sufficiently comprehensive for our purpose.

Many problems aside from the primary object of this work presented themselves as preparations went on; only those, however, which could be made with the minimal expenditure of time other than that required for the real question to be solved were undertaken. They comprise the following:

(1) Primary data; ratio of infected to non-infected natives in certain locations as shown by the presence or absence of malarial parasites in their peripheral circulation. (2) Types of malarial parasites found during the course of the investigation, both with respect to species and stages in development. (3) Comparison of race, sex, age, occupation and relative immunity among the different peoples examined. (4) Species of mosquitoes, with particular attention to the genus *Anopheles*. (5) Effect of cinchonization.

In order to facilitate reference, this paper is divided as follows:

1. General technic, methods of examination, data upon which the methods herein described were based.
2. Towns visited, reasons for their selection.
3. Varieties of malarial parasites encountered; species of *Anopheles*.
4. Results of investigation.
5. Summary and conclusions.

I. GENERAL TECHNIC, METHODS, STAINS.

There are two methods available, practically, for the demonstration of malarial organisms in the blood: by using blood films, in which case the blood is not subject to any process which materially changes its morphology, for a time at least, and by fixing, drying and staining.

Authorities differ in their opinions as to the relative accuracy of these methods. Manson, who has had much experience with malarial blood and the technic of malarial examination contends that the film method is more reliable, while many other observers are in favor of stained preparations, although most of them admit that the latter method is perhaps more liable to misinterpretation in the hands of the inexperienced. I made two series of observations on this point to settle the matter as far as the work here was concerned. In choosing the method used in this work one must consider not only accuracy, which is the most important point, but such factors as time, convenience, simplicity and amount of material to be transported in case the relative accuracy between the two methods is approximately the same.

The first series consisted in the examination of nearly six hundred blood slides, both stained and unstained, to

become more familiar with the various forms of malarial parasites encountered in Panama, and secondarily to form some idea of the relative value of the two methods. The second series consisted in a careful study of one hundred cases as they came into the hospital, making one stained and one unstained preparation from each patient. The cases were not necessarily malarial, but were taken in order as they presented themselves. The results are:

Total cases examined	100
Total cases positive stained	69
Total cases positive unstained	68
Total cases positive stained, and negative unstained	3
Total cases positive unstained, negative stained	2

The slight difference, about 2 per cent., in favor of the stained preparations is well within the limits of error along other lines of the investigation, particularly with respect to the choice of a district for examination, which shall represent fairly the status of the whole town.

At Bohio, which is a fairly large town, for example, it was impossible to examine every native, and the probable error in selecting a representative section is at least 2 per cent. On the other hand, the rapidity which could be obtained with film preparations was much greater than would be the case with stained preparations. To reduce the working error as much as possible, the specimens of blood for examination were made in duplicate, and the results show that about 4 per cent. of the cases were positive on the second slide which were negative in the first examination. The fact that one could examine quickly a fresh preparation to determine its suitability for malarial examination was the final factor which led to the selection of the film method; one could examine two films to determine their excellence in a very brief interval, and in case another was needed it could be obtained before the native had left the station, a very desirable procedure, because the inhabitants were wont to depart as soon as they were allowed.

Technic of Preparing Films and Stained Preparations.—Cover glasses and slides more than sufficient for the day's work were cleaned in strong soap solution, rinsed several times in rain water, and stored in alcohol. When about to make either a film or smear the lobe of the ear was cleaned with alcohol, rubbed briskly and freely punctured with a lancet, which was kept, when not in use, in 5 per cent. phenol solution. The first drop of blood was wiped off, and the second, after it had welled up to a suitable size, placed on the slide or cover glass. In no case was the glass allowed to touch the ear.

If the slide and cover glass were perfectly clean there was no difficulty in obtaining a suitable film; the blood flows evenly between slide and cover glass, forming eventually a spread which contained the blood cells spread in a thin, uniform layer with the cells just far enough apart that they do not overlie one another. If this result was not obtained the first time a second film was made.

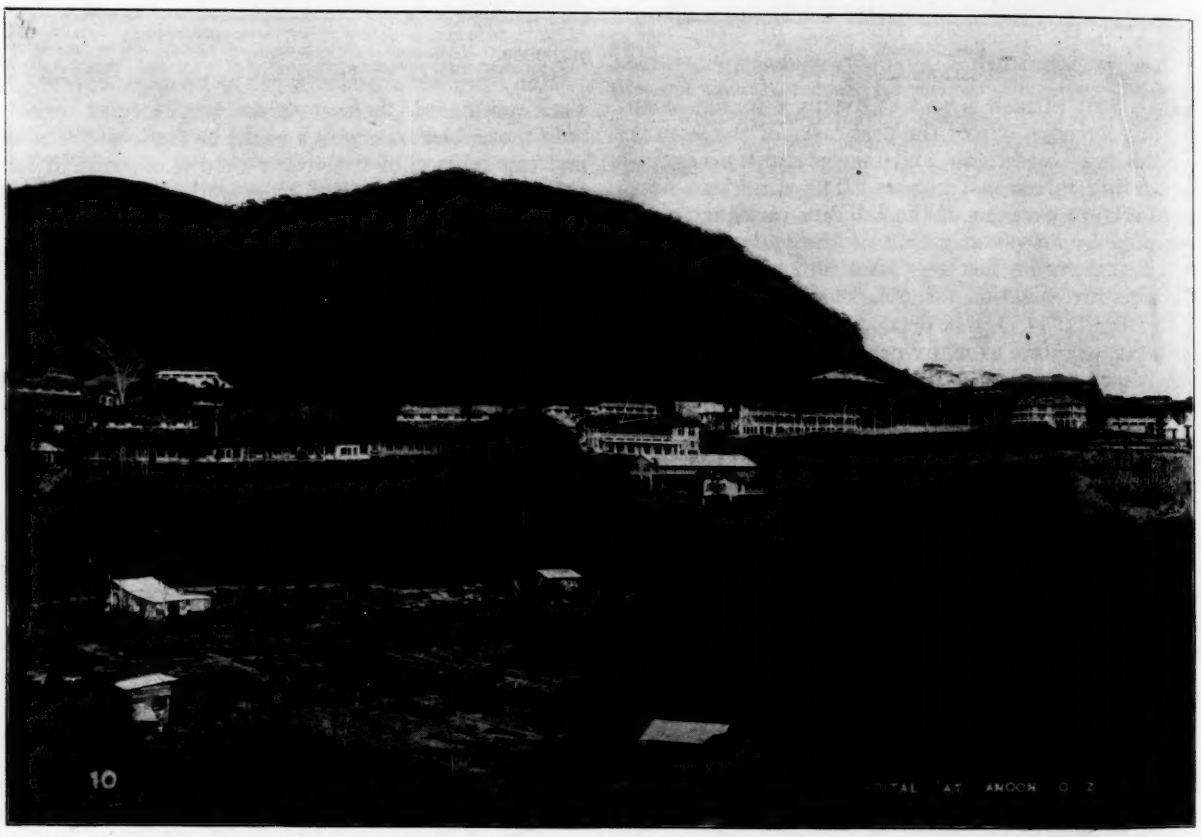


Fig. 1.—Ancon Hospital, Canal Zone; capacity 400 beds. Seen from Tivoli Hill. (We are indebted to Dr. Henry Emerson Wetherill, of Ancon Hospital, for this and the illustration on the opposite page.)

Stained preparations were also made after the preliminary cleaning of the ear; the blood drop was placed on one end of a slide, another slide was so placed that it lay between the blood drop and the end of the slide; if now the top slide was brought up to the drop of blood, the latter would flow along the edge of the upper slide, which could then without pressure be gently drawn along the lower slide in such a manner that the blood would form a thin, perfectly spread layer which would dry almost instantly. As a rule one could be certain after five minutes' examination of a film that it was positive or negative; frequently one would find parasites in a positive slide almost at once.

Staining.—Although most of the staining was done toward the close of this investigation, it may be well to include the methods in use here because there are a few points not men-

tioned by other authors which have been found useful in this connection.

Intravitam Staining.—I have tried with a certain amount of success to make an intravitam stain which shall stain the parasites in films; such a procedure would be useful because the blood would not be previously subjected to drying or other harmful agent which almost certainly must affect to a certain extent at least the morphology of the parasites.

Methylene blue has for a long time been used for this purpose, and this substance is the basis of the stain I used. The methylene blue is polychromed in such a manner that it contains a certain percentage of a substance or substances variously called polychrome methylene blue, or azur. It is probable that azur is the correct term, and it will be referred to as such in this paper. It is formed as follows: ½ gm. pure silver nitrate is dissolved in about 50 cm. of water, and precipitated by 10 per cent. caustic soda solution. The resulting precipitate is washed with distilled water by decantation until the wash water is free from chlorids, then added to the following solution while still moist: 1.2 gm. pure sodium chlorid are placed in 100 cm. of distilled water, thoroughly dissolved and filtered; 1 gm. pure methylene blue is added, thoroughly dissolved, and again filtered. To this solution is then added the precipitated silver, and the whole placed in the 37 degree thermostat and allowed to remain a week. At the end of this time it will be noted that the color of the liquid has changed from blue to a purplish tint, which is due to the formation of azur. The amount of azur may be determined roughly by adding a small amount of the solution of chloroform; the latter dissolves the azur, producing a more or less pronounced purplish color, the depth of which is approximately an indication of the amount of azur in the solution. The sodium chlorid is added to make the solution isotonic with the blood. After filtering the solution containing azur it is ready for use; one places a drop of this stain on a slide, and drops the cover-glass containing the blood drop to be examined in the drop of stain. The two mix instantly, and one has but to wait about a minute for the various elements to absorb the color when the preparation is ready for examination. Such preparations keep rather longer than films without this stain. Preparations made this way show a slight darkening of the field, which makes the contrast between the erythrocytes containing parasites and the serum somewhat greater, as the organisms, while not stained, stand out more.

The extracellular forms of both the tertian and estivo-autumnal parasites stain; the crescents of the latter stain a deep blue. Leucocytes show a certain amount of metachromatic staining in their granules, and even after being deeply stained do not lose their motility. Blood platelets stain blue.

Staining Films and Smears.—There is a great variety of stains from which to choose, but the majority of investigators at the present time use some modification of Leishmann's stain, usually Hastings' or Wright's. The former has given us the best and most constant results. Until recently we have been unable to obtain the powder for this stain from the United States which shall always give us the best results, and we have been in the habit of making the stain in the laboratory. At the start considerable difficulty was encountered in making the stain exactly the same each time; the time necessary to perform the various steps necessarily varies, but the relative coloring of chromatin and protoplasm of the parasites should remain the same. This variation seemed to be due to the fact that the addition of the eosin to the methylene blue could be stopped at various intervals, obtaining at each interval a stain which had an affinity for either protoplasm or chromatin; beginning at one end one observed that the protoplasm was heavily stained, while the chromatin was quite unstained, and by varying the proportion of eosin relative to the methylene blue the chromatin could be brought out, with the protoplasm uncolored. I finally hit on the scheme of adding a small proportion of eosin, after preparing the polychromed methylene blue as recommended by one of the writers, then withdrawing a small portion of the fluid after stirring, and placing it on a porcelain plate. On the white background one could add experimentally repeated small portions of eosin to see if it had the desired effect; then repeat the performance in the bulk of the stain. It was found that when

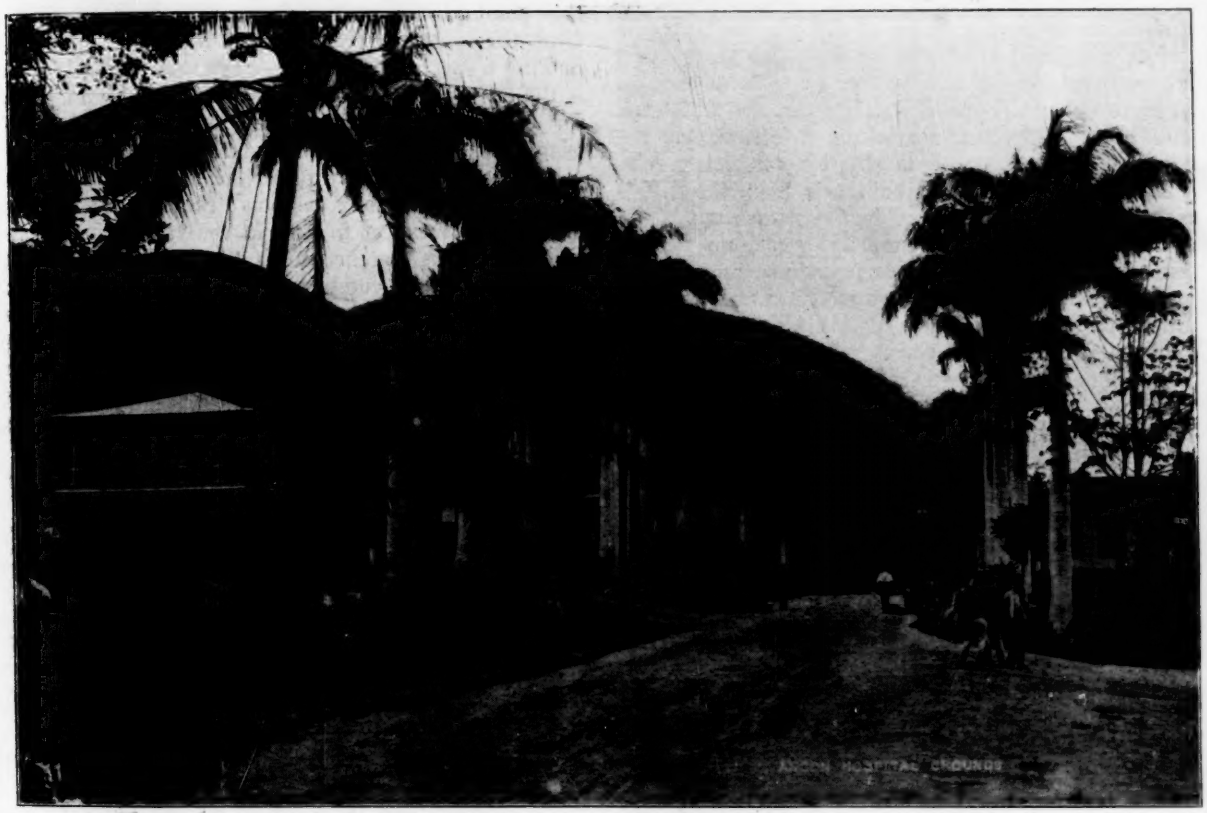


Fig. 2.—Entrance to Ancon Hospital, Canal Zone, showing part of the hospital grounds.

the precipitation had gone far enough, the precipitate separated very quickly from the rest of the fluid, leaving a liquid which was almost colorless except for a substance which, apparently derived from eosin, resembled superficially fluorescene. This titration method has been tried again and again and invariably has given a stain that is very constant in its results. Aside from this, the stain used was made exactly according to the Hastings formula, and always gave excellent pictures. In order to save time in staining a long glass dish was provided with two glass rods, placed two inches apart. On these rods one could place ten slides and stain them at one time. The appearance of the malarial parasites when stained by this stain is so well known there is no need of discussing this point at this time.

II. TOWNS VISITED; REASONS FOR THEIR SELECTION.

Statistics bearing on the distribution of malaria in a given region must, to be of value, represent in the ultimate analysis the mean condition of the population in this respect. The mean may be derived in a variety of ways—by selecting a town or section whose medical returns show an average number of sick per unit population when compared with similar statistics from other towns; by taking equal numbers of cases from each of two or more towns of approximately equal size which, on the one hand, represent maximum infection, on the other minimal infection; or, finally, by comparing relatively the same numbers of inhabitants from the different races or nationalities living in the same zone.

The inherent error is necessarily great, no matter how one elects to make these observations, and it was finally decided best for the work here to examine a representative portion of the town of Bohio and practically the whole of the village of Gatun. These towns are in the Canal Zone, under the sanitary jurisdiction of the United States government, and they are very favorably situated and easily reached.

Bohio.—Bohio is situated on the line of the Panama Railroad, about seventeen miles from Colon and half a mile from the Chagres River. The population is about eight hundred, composed, to a considerable extent of West Indians, and more particularly of Jamaicans. They have lived in this climate a relatively short time and presumably have not acquired, to any considerable degree, an immunity to malaria or even to any extent a malarial tolerance, if such a thing occurs.

The location of this town on the railroad, its proximity to the proposed Bohio dam, and its situation on several important trails leading into the interior of the country have combined to make it a place of considerable business importance. Many of the inhabitants work either directly or indirectly for the United States government, and the agricultural interests are much less important here than in the town next to be described. The percentage of native-born to foreign-born inhabitants is small, contrasting in this respect also with the other place chosen for investigation.

In both Bohio and Gatun the inhabitants do not use mosquito bars nor do they screen their houses. This has an important bearing on the dissemination of malaria and the introduction of preventive measures against this disease. Most of the houses in Bohio are frame, with corrugated iron roofs—a very common type of structure here. This town, then, represents a fairly large settlement with a great preponderance of foreign-born inhabitants and a considerable commerce with the interior and the sea coast, factors which are not without significance in the study of malaria. Very little difficulty was experienced in obtaining the required number of inhabitants for examination: a section of the town representing about one-third both in area and population was selected and the inhabitants were brought to the local dispensary in detachments by a special messenger. The school children, however, were visited in the school houses.

Gatun.—Gatun is the opposite of Bohio both in the character of the people and in the structure of the houses. Both places, however, are surrounded, to greater or less extent, with swamps, and both lie on the Panama Railroad line. It is chiefly the difference in the people, both in regard to their ancestry and customs, which is responsible for the differences which will be commented on later.

This town is situated on a little island in the Chagres River about three-fourths of a mile long and three-eighths of a mile wide in the widest portion. It is formed by the Chagres River in front and the canal in the rear; the canal is water-containing for some distance above this point at the present time. The land slopes gently from the center of the island to the water on all sides, making a sort of natural drainage, although at no point is the land very much elevated above sea level. Except for a few swampy spots on the ends of the island, the island itself is free from stagnant water.

The natives are very primitive both in their manner of living and in their customs; they occupy huts such as one would expect to find in central Africa, made of cane sides with thatched roofs or adobe. Their furniture is very primitive, composed chiefly of hammocks made of a species of tough grass and a few rude chairs covered with raw hide. They still grind rice and corn with huge wooden mortars and pestles, and use boats made from hollowed-out tree trunks. They have lived on this spot for generations, and civilization has made remarkably little headway in changing their customs. They are superstitious, reserved and difficult to approach, and it was with much trouble that we succeeded in getting their permission to make our observations, although when they finally saw that the work would benefit them they reluctantly consented.

Bohio and Gatun, it will be seen, differ greatly in their houses, inhabitants and manner of living, and admirably lend themselves to this work.

(To be continued.)

PLASTIC RECONSTRUCTION OF THE LOWER JAW.

CARL BECK, M.D.
CHICAGO.

The removal of a portion or of the whole mandible has its effect on the functions of the jaws and the form of the face. The effect on the functions of the removal of a portion of the jaw will depend greatly on the part of the bone removed and its size. If a small portion of the middle part of the jaw is removed the function may not be disturbed at all. If half of the ramus is removed the mastication and the speech may be greatly impaired, and if the whole jaw is removed the function of the lower jaw will be entirely abolished. Even a small resection, however, will have an effect on the shape of the face which, as a rule, will be shown by disfigurement or deformity.

The jaw plays such an important rôle in the formation of the face, through support of the cheeks and the prominence of the chin, that the symmetry of the face and the esthetic effect is greatly disturbed if a part

missing. This is shown in those cases in which, through lack or asymmetry of teeth, or through atrophic changes, the face becomes disfigured.

These points have to be taken into consideration in cases of operation on the lower jaw; more especially on account of the possibility of preventing such deformities by the proper treatment during operation.

There are many indications for operations on the mandible which call for a partial removal of the bone. Inflammatory conditions which lead to necrosis of the bone, and especially tumor formations, are the main causes for such operations. Whether the resection of the jaw is made permanent or only temporary is of great importance. If a permanent resection is made it is the duty of the surgeon to see that the part removed is in some way replaced by some resistant tissue which will give support to the soft structures and which at the same time will allow motion. It will be necessary to replace the removed bone by some material which will give to the face the normal expression and shape. The best method at present is the replacement of the removed structures by foreign bodies in the shape of dental plates. A plate which holds the teeth and imitates the shape of the jaw is well borne within the mouth, ordinarily causes very little irritation, gives to the soft structure a support, and restores the shape and symmetry of the face. Many surgeons, among them Bardenheuer of Cologne, have tried to restore a jaw by autoplasty, but the results are not very gratifying. The majority of experienced men have decided in favor of the prosthesis. Difficulties arise, however, when the prosthetic appliance is to be put in place, some time after the operation, because the deformity and impairment of function takes place immediately with the removal of the bone.

Hence it becomes necessary to apply the prosthesis at the time of operation and this is a difficult task because the operation is undertaken by a surgeon and the prosthesis is applied by a dentist, and hardly ever is the surgeon at the same time a good dentist or the dentist at the same time a good surgeon. It was, therefore, a very natural result of experience that Dr. Claude Martin of Lyons, who is a dental surgeon of great ability, should be the first to give to us a method of removing the jaw without causing disfigurement or impaired function. Although he was not the first one to expound the idea, he was the first to apply the method practically and a large number of patients operated on with good results are a proof that his method is practical and successful. He prepares a prosthetic appliance before he removes the jaw, or part of it, and implants it at the time of the operation in the cavity remaining on the removal of the jaw. The appliance is made of hard rubber, with a complicated system of channels through which the cavity, which naturally secretes a great deal of pus, can be irrigated and kept clean. This hard rubber prosthesis is only temporary and is replaced later by the permanent dental plate with teeth which can be removed for cleansing purposes and carried in the same manner as the ordinary plate after the removal of the teeth which hinges on the alveolar process. Each individual case requires an individual plate, so that no such plate can be bought from a manufacturer. Some operators have objected to this method in some particulars, although they accept the principle of it, namely, that a prosthetic appliance is necessary, but as material they have used metal instead of hard rubber. Boennecken and Partsch of Breslau have suggested the use of metal splints; the former suggested a wire splint, the latter a plate which can be cut to a desired size and fastened into the jaw when needed. Of course this means that the splint can be applied only in median resection, but when one-half of the jaw is resected clear up to the joint, the metal appliance is out of the question. Martin's method, however, allows even in these cases, or in cases of total removal of the mandible, the application of a prosthetic appliance. The accompanying illustration (Fig. 1.) is from photographs of two models which I received from Claude Martin, through the kindness of Dr. Carrel, and which represent the average case of a central and lateral resection. Dr. Martin is especially proud of the innovation of a certain flange to prevent the lateral displacement of this appliance. He calls this flange "ailette." I find, however, that Dr. Thomas Gilmer of Chicago, as early as 1891, recommended a similar device and has

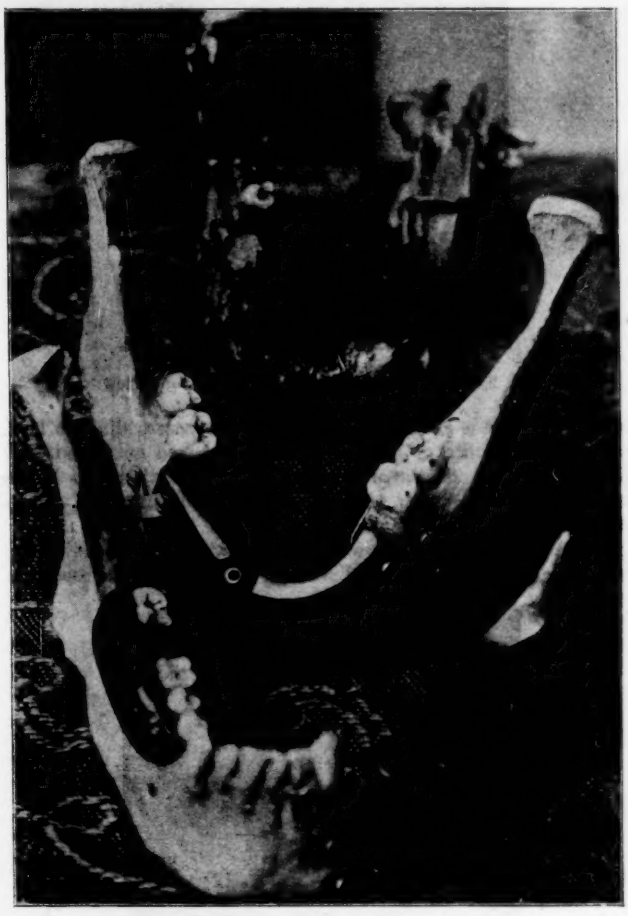


Fig. 1.—The upper figure is the jaw of the patient. The two others are Martin models.

even gone so far as to prevent the displacement of the flange by applying an additional device which keeps the lower jaw from opening too much, through an elastic band from the chin to a skull cap. His paper was published in the *Dental Review* and has not found entrance into the general medical literature.

This would be a general outline of plastic reconstruction of a jaw in case of removal by any method during the operation. What shall we do, however, when this precaution has not been taken and the jaw has been removed partially or totally, the cavity allowed to shrink, when mastication, speech and other physiological functions are impaired and when the face has become greatly disfigured? A case of this nature has come under my observation during the last year and has given me a chance to study this branch of plastic surgery.

Patient.—Miss D., aged 32, a school teacher, comes from a healthy family. She had never been sick up to the time when her present ailment began, that is about three and one-half years ago.

History of Disease.—She began suffering from a toothache in the middle portion of her lower jaw. Her teeth seemed to be perfect. She was a good looking girl with perfectly symmetrical features. A dentist whom she consulted about her ailment incised a small gum boil, but the process did not heal out. On the contrary a larger tumor appeared on the site of the old one. A doctor was called in consultation and he in turn incised the larger abscess, without relieving her condition.

Operation.—After a few weeks of palliative treatment he decided that something radical had to be done and he took the girl to a hospital where he removed, in one operation, the whole jaw from one joint to the other. The accompanying illustration (Fig. 1) gives the aspect of this jaw and it shows that the ascending arch and portions of the horizontal arch are perfectly normal, that the central portion of the jaw was the seat of a central necrosis within an osteomyelitic focus. A large portion of bone had been destroyed, but there were some pieces of healthy bone tissue remaining. Such an extensive operation was entirely uncalled for; but if it had to be done, a preliminary prosthesis of the kind described above would have been the proper method of treatment. Instead of that, an incision was made from one ear to the other underneath the chin, the jaw was removed in sections, leaving only some shreds of periosteum, fortunately for the patient, because spiculæ of bone afterwards formed from this periosteum and aided materially in the treatment of the case.

Fig. 2.—Before cosmetic operation. Front view.

Fig. 3.—Before cosmetic operation. Side view.

Fig. 4.—After cosmetic operation. Side view.

Postoperative History.—The wound did not heal entirely by primary union. The retracted scars on the face show where deep and long suppurating fistulæ kept the cavity draining. Ultimately, however, the wound healed. The result is apparent from the accompanying illustrations (Figs. 2 and 3). It will be seen that instead of a prominent chin there is a small lobule of contracted tissue which allows the comparatively large lips to droop. The upper lip is projecting a good deal and the teeth of the upper jaw are prominent. The nose apparently projects a good deal more. The cheeks are retracted and behind the cheeks are hollow spaces into which a thumb can be placed where the ascending arches had been removed. The speech of the patient was greatly impaired. The constant running of the saliva from the mouth was a very disagreeable symptom. The mouth cavity was exposed to the air and

Fig. 5.—After cosmetic operation. Front view.

account of this exposure easy disintegration of food particles within the mouth took place and a penetrating odor made the patient's breath particularly offensive. These symptoms not only produced a great deal of discomfort and suffering, but they also brought the patient to the point of losing her position as teacher. This is mentioned because it shows the importance of reconstruction of the jaw and how much the surgeon ought to try to prevent such a disastrous result.

Cosmetic Operation.—Dr. Goslee, a dentist of great ability, especially in the line of prosthetic work, had charge of this case and he tried with an ingenious device in the form of a plate hinged to the upper jaw to restore the function of the mouth and the shape of the chin; but all of his trials failed because there was no support and a plate could not be borne. He finally gave it up. After a consultation with him I thought first of trying Dr. Claude Martin's method by restoring the cavity in which the jaw had lain, excising all the scars and forcing Martin's plate into the new cavity. This seemed feasible, but the more I studied the question the more convinced I became that a septic infection would be inevitable and that the patient, who had been suffering so long and was in delicate health, would succumb to this extensive and uncertain method of plastic surgery. I decided, therefore, to try another method. After finding some small spiculæ of bone, the longest about one inch, within the scarred tissue I thought hard paraffin would form a good support for the soft tissue and if tolerated would ultimately allow us to restore the original shape of the jaw. I began with the injection of a small quanity into the deepest portion in front of the ear. The injection was done in the usual manner, with a syringe devised by my brother, Dr. Jos. Beck. The paraffin was well borne and there was no reaction. I became bolder and injected larger quantities, first into the side, then into the center and gradually to the whole extent of the missing jaw. Of course it was impossible to straighten out immediately the deepest portion where the fistulæ that had been draining so long were situated.

Result.—The result was getting better with every injection. Not only did the salivation stop, but the movement of the jaws was possible and the appearance greatly improved as the accompanying illustrations show (Figs. 4 and 5). The offensive odor disappeared, the speech is perfectly normal and the patient has resumed her work as teacher.

Several months have now passed and when the patient was exhibited at the Chicago Medical Society, September meeting last year, the members of the Society could satisfy themselves of the fairly good functional and cosmetic results. I hope that the paraffin, which has not diminished in size up to the present, will remain for a long time, but even if it does not, I think that injections can afterward be made to replace the missing material. After a time an attempt will be made to form a ridge within the mouth for a plate.

ILEOSIGMOIDOSTOMY WITH OBLITERATION OF THE ILEOCECAL COMMUNICATION, FOR THE TREATMENT OF ULCERS OF THE COLON.

R. C. COFFEY, M.D.

Surgeon to and Medical Director of the North Pacific Sanatorium.

PORTLAND, ORE.

For many centuries past chronic dyspepsia, obstinate constipation, cramps and colics and peritonitis have been valuable cloaks by which medical men have been able to hide their ignorance of pathologic conditions within the abdomen. Asepsis and the rapid development of abdominal surgery have enabled us to study living pathology in recent years. This has taught us to place peritonitis in a class with dropsy, in that it is a result of some other real disease, directly connected with the digestive, eliminative or reproductive organs in the abdominal cavity. Patients treated ten or fifteen years ago for abdominal cramps and colics of recurrent type are now known to have had, in the great majority of cases, either appendicitis or gall-bladder disease, neither of which is curable by medical treatment. More recent years have brought to light the fact that a large percentage of the persistent incurable gastric disturbances or dyspepsias are due to ulcer of the stomach or duodenum, obscure gall-bladder disease, occasionally pancreatic disease and other conditions in the abdominal cavity, of a mechanical nature. The diagnosis and treatment of these conditions are being rapidly put on a scientific basis.

Other cloaks which hide much abdominal pathology are obstinate constipation and persistent diarrhea. Medical men are recognizing more all the time that many of these cases are due to lesions of the colon in the form of ulcers, etc., but admit that medical means are

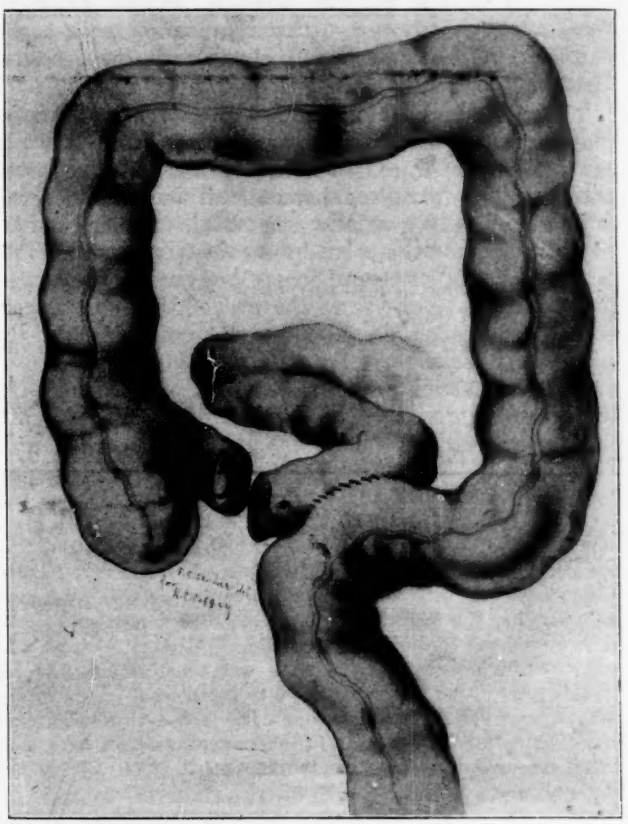


Fig. 1.—Ileosigmoidostomy with obliteration of the ileocecal communication.

but partially successful in the treatment of these diseases. The persistent and tireless work of Mayo, Moynihan and many other surgeons, on the stomach and duodenum have taught us that the proper and successful way to treat an ulcer is to give it rest. Success along this line has been little short of marvelous. By draining the stomach at its lowest point into the jejunum, almost all ulcers of the stomach and duodenum are curable. It is somewhat strange that more has not been done in the treatment of ulcers of the colon, which, while not so frequent or fatal as ulcers of the stomach, are much more frequent and have produced many more invalids than we have heretofore imagined.

Weir, by bringing the appendix through the abdominal wall, to be used as an irrigating tube, has unquestionably added much to the efficiency and convenience of medical and topical treatment of diseases of the colon.

This will, no doubt, be sufficient in many instances. There are many cases, however, which are not perceptibly benefited by any kind of medical or local applications, even when in more accessible portions than the upper parts of the colon. Therefore, surgery will again be called on for permanent relief.

Cheyne, Burghard and others have recommended and applied, in a number of cases of persistent ulcers of the colon, colostomy, using the ascending colon, thus eliminating the functions of the colon for several months or years at a time, and have been very successful in the cure of these conditions. Treves and M. H. Richardson have removed large portions of the colon for abnormal dilatation and gaseous distension, with very good results. Osler recommends this procedure as justifiable. Some surgeons, notably the Mayos, have removed or short-circuited almost the entire colon for cancer and extensive fecal fistulæ, and have concluded that the colon is by no means essential in the process of digestion and assimilation, and that its ablation, even as far down as the sigmoid flexure, apparently produces no disturbance.

Therefore, in view of the fact that it is well known that ulcers are best treated by absolute rest; that rest can only be produced by relieving the part as far as possible of its function; that medical and topical applications are only partially successful in many cases; that drainage of the colon by a colostomy on the right side has proved successful in the treatment of ulcers of the colon; that non-use of the rest of the colon apparently produces no degenerative changes, and that the colon apparently plays no vital part in the process of digestion and assimilation, I have felt justified in doing the operation described in the title of the paper. The case in which the operation was done is related below.

Patient.—Mr. S., aged 22, had been troubled with constipation, more or less obstinate, for four years. For the past two years the pain and pressure of the gas in the bowels, with other effects of the obstinate constipation, had been so marked that the patient had been unable to perform his labor as a farmer. His trouble had gradually grown worse during this time, notwithstanding the fact that he had consulted a number of eminent physicians concerning his trouble. All they were able to make out in the way of diagnosis was constipation. As his trouble grew worse, he was unable to get normal action of the bowels for several days at a time with even severe cathartics, and then only with the aid of high enemata, which were used with some result. He came to me Oct. 3, 1905, giving the above history.

Treatment.—After examining him thoroughly I agreed with the diagnosis which had been previously made and referred the man to an internist for treatment. He pronounced the case one of spastic constipation, and put him on a special diet and line of treatment. Nov. 23, 1905, the patient returned to me, stating that he had obtained no relief from the medical treatment and that he had lost all hope of relief in medicine. He suffered constantly from pain, which he located chiefly at the splenic flexure of the colon, stating that it seemed that the contents of the bowels, including gases, were obstructed at this point and could not pass. The distension of the colon was so marked and distressing that he could locate it very accurately himself, which location could be verified by percussion.

Operation.—At his request I made an exploratory incision, cutting down through the right rectus muscle. This revealed a somewhat congested and markedly distended ascending colon. The appendix was not seriously diseased, but was removed, lest it might be acting as a source of irritation. Another incision was made through the left rectus muscle, which allowed an examination of the splenic and sigmoid flexures. Examination revealed no visible stricture or obstruction at this point, but showed congested and distend d colon.

Postoperative History.—As soon as the man had recovered from the immediate effects of the operation we found that he still complained the same as before. His trouble continued, and we had an opportunity to observe carefully his condition and found that no amount of cathartic medicine would produce a free action of the bowels except with the use of high enemata. Severe cathartics would nauseate him, but would do no more. His pain seemed to be intense, as described before. At the end of three weeks from the time of this exploratory operation he made the arbitrary demand that we open him up again and do something more radical, as he preferred death to his condition. We delayed this, hoping that he might get better, but with no avail. At the end of five weeks, having been thoroughly convinced that the basic cause was ulcers which we had failed to locate at the exploratory operation, we suggested the idea of making a colostomy, draining the right side. This he refused to have done on account of the inconvenience of the artificial opening, so the following operation was proposed and performed Dec. 29, 1905:

Second Operation.—The abdomen was opened in the median line and the ileum cut in two near the ileocecal valve, between clamps. The two ends were turned in and an ileosigmoidostomy was performed with clamps and sutures, after the manner ordinarily used in the modern method of gastroenterostomy (Fig. 1). At this operation an ulcer was located about two inches above the point of anastomosis of the sigmoid flexure and another about three inches higher up on the descending colon near the mesentery. We were not able to examine the splenic flexure through this wound, but believe that there was unquestionably another ulcer at this point, which was overlooked at the former exploratory operation.

Result.—After this second operation the patient made an uninterrupted recovery. Three days afterward he began to take nourishment, and in ten days he was on a full and regular diet. He has never had pain in his colon since, nor has he had the distension. His bowels have acted almost every day since the operation without a cathartic, and yet without diarrhea. His appetite has been good and his digestion has been perfect, so far as we can see. At the early date of Feb. 13, 1906, the case looked like a complete success.

February 16 the patient returned, stating that his bowels were not acting properly and that he could feel gas in the colon as far around as the cecum. On examination I found it also. On giving him a cathartic no action was obtained, but the patient said the action seemed to pass upward into the descending colon. By digital examination no fecal matter was found in the rectum. By giving a high enema in large quantities the bowels could be made to act. The same thing was repeated and was kept up for ten days. All the fecal matter, according to his sensation, passed first down deep into the pelvis and then back up into the left side. On thoroughly studying the case I finally made a correct diagnosis. I opened his abdomen and found that the point of junction of the former anastomosis had become adherent to the abdominal wall, thus fixing it. The sigmoid flexure above the point of anastomosis, which was nearly twelve inches in length, had prolapsed to the bottom of the pelvis, making a sharp kink at the point of anastomosis and thus directing the fecal current into the sigmoid instead of the rectum. This was lifted up and the sigmoid sutured to the peritoneum just above the psoas muscle in the left flank. The loose sigmoid flexure was shortened by plication from above downward with a number of transverse rows of catgut sutures. This relieved the condition and prevented prolapse of the sigmoid. The bowels are acting well at this date (March 24), and patient is up and feeling well. I think this is an important observation in connection with the operation, and my mistake was in not attending to this at the previous operation, as the danger was forseen at that time.

This case is typical of the condition which has been described by certain authors under the head of spastic constipation. The continuing cause, which may have been secondary to an atonic constipation, was apparently the ulcers. The symptoms were immediately relieved by short-circuiting the affected part. The final result of this procedure is, of course, in the future.

In studying this subject, there seems to be a pathologic parallel between the stomach and certain portions of the colon. For instance, food is detained in the stomach for a few hours by the action of the pylorus. There is, then, no depot till the cecum is reached. Fecal matter is somewhat detained here by gravity. It is next detained above the so-called sphincter Oberne and held in the sigmoid flexure and descending colon for some time. The final depot is the rectum.

Overwork, nervous strain, indiscretion as to diet and hours for meals, disturb and change the secretions of the stomach, producing indigestion and, finally, gastric or duodenal ulcers. By irregular habits as regards the bowels, nervous strain, etc., an habitual and atonic constipation is produced. By mechanical pressure of hardened feces or from the effects of decomposition ulcers are produced in these parts of the colon.

Ulcers of the stomach, when irritated by the passing of food over them, produce a spastic condition of the pylorus which prevents the healing of the ulcers, holds the contents of the stomach too long and in some cases produces a dilatation and consequent increase in the disorder of the secretions. Ulcers of the colon, at times, apparently produce a spastic condition of the intestine at or near the point of the ulcer which has the same effect.

These depots in the alimentary canal are the ulcer areas in the young and the cancer areas in later life.

Short-circuting and draining cures ulcers of the stomach and thereby may prevent cancer to an extent in later life. It is probable that the same is true and reasonable in the treatment of ulcers of the colon.

WHITHER ARE WE DRIFTING IN THERAPEUTICS?*

CLARENCE H. VAUGHT, M.D.

Vice-President State Association of Railway Surgeons; President Central Kentucky Medical Society.

RICHMOND, KY.

I believe that one of the greatest questions of our time is before us and one that we can have more influence in solving than can any other class of men or profession with which I am acquainted.

"The patent and proprietary medicine conspiracy," which has reached the climax of human endurance, is being assailed from many quarters, and the rankest of these gigantic frauds are on the run, and I want this society to get on the firing line and, if possible, to assist in their speedy extermination.

A number of high-class periodicals, the *Ladies' Home Journal, Collier's Weekly* and others, are the means, and Edward Bok, Norman Hapgood, Samuel Hopkins Adams and M. J. Sullivan are the men behind the means, that have caused such an awakening among the profession throughout the country. These men are real pioneers in this noble work. Is it not strange that a great profession like ours, with the massive intellect among our members, has been so stupid to the real situation, so well satisfied, so afraid, perhaps, that some wag might accuse the members of selfish motives, that not an effective word has been written or said against this monster curse? Suppose we are accused of selfish motives and every other thing in the calendar. This should not disconcert us or cause us to swerve so much as a line from out duty to ourselves and to humanity. I believe that every medical association in this country should elect to honorary membership these men who are doing such conspicuously good work for all the people and our profession as well.

Since this great question has been brought to our very door by laymen in a lay press, I thought it might be pertinent to ask, "Whither are we drifting"? Have we, by careful analysis and deduction, made any advancement toward a higher and more perfect therapy, or have we, like so many others, been drifting by the enormity of the advertising matter and the seductive wiles of that ever-present and always agreeable gentleman, the detail man of proprietary medicine, back to the abyss of necromacy, ignorance and superstition? Have we not been cajoled by this means into giving at least our tacit indorsement to most, if not all, the proprietaries and specials that we see, many of which are without merit, others absolutely harmful?

No man can foreknow what will be the action of from ten to fifteen medicines together, even could the action of a single one be foretold. Your office and mine are being liberally supplied with samples of these new compounds, almost daily, of every imaginable name, some beautiful, others poetic, but we could never tell from the name what one of these compounds contained. The reason for this, I suppose, is because a name that means nothing can be as easily copyrighted as one that means something. The idea is to protect patent or secret formulas from other vultures, whose prey is human hope and credulity, and the ignorance or carelessness of the profession of which we are or should be representative.

THE DETAIL MAN.

The detail man calls on you at your office—doesn't want to take much of your valuable time, but has something that he knows is of interest to you when you have a moment's leisure. With visions of the importance of the message and of the fact that a stranger is within, you rush matters, and the doctor, it may be, who has failed in practice or a young one who uses this means of saving sufficient money to enable him to begin the practice, shows you what he has to offer (always ethical and meeting every test), gives you enough literature to last you and your family a month, and a liberal supply of samples, and expresses the hope that you will try them.

THE DESIRED EFFECT.

Strange as it may seem, at your first opportunity you do try them. The visit had the desired effect. You accept the statement, ethics and all, and some unfortunate, it may be the first patient who comes to you, is made the victim. It makes little difference for what the patient consults you, as many of the proprietaries are fully recommended, and testimonials from thoughtless physicians are not wanting to show you that you have a specific for any disease that confronts you. The medicine is tried on different patients, some of them have told you perhaps that the medicine at least was palpable, sailing seems easy, a ready-made prescription for all who call, so easy to write, perfectly simple, the other fellow doing the work you should do, while you get the pay.

Behold your surprise, however, in the course of a short time. You have been called to a home. After your visit has been concluded, you perhaps have suggested the use of some medicine for a poultice, you give explicit directions that the medicine should be applied to a cloth, then to the offending part. At this time some godly grandmother elevates her spectacles and asks, "Doctor, is that medicine, you are going to send, this Philogistine"? It may be some younger and more

* Read before the Madison County Medical Society.

charming member of the household who thus rudely breaks in on your dreams of what you expected to accomplish with the new remedy for all inflammatory conditions (for each member of the household knows all about it). You are compelled to answer, "Yes, this is the medicine I intended to send you." Grandma will say to you that "Mrs. Jones used it on her cow's leg, and Mrs. Smith used it on her husband's leg—they had some of it left and sent it over—we tried it, but it didn't do John's lungs any good." This is simply an illustration that could be duplicated many times in the course of a year with this and hundreds of other proprietaries.

You will, no doubt, say that this and that one has done good service for you. Perhaps this is true, but have you at such times taken into account that great law of natural therapeutics, the operation of the *vis medicatrix naturæ*, the manner and processes of healing which occur independently of our art? It is this law that enables the homeopath to relate his sugar cures and the medical skeptic to smile in his infidelity and that brings you and me out of the many close places into which proprietaries and carelessness have placed us. And thus have we not been duped ourselves in seeking some more potent means to relieve the suffering that we see around us?

SEEKING REMEDIES.

Yet we ought not to be criticised for this alone, as it has been truly said, "Man from the earliest antiquity has continually sought for means for the relief of pain."

"The most ancient record of the race introduces the hero of the flood, plunged in a deep and scandalous sleep under the influence of wine which he had prepared. At the siege of Troy the Grecian surgeons were skilled in the art of assuaging pains of injured men by the application of alcohol and carbonic acid to their wounds. Thus the venerable Nestor came to the relief of the wounded Macheon, with a poultice composed of onions, cheese and meal, mixed with the wine of Pramos.

"Other agents still more potent were known to the wise men of Egypt, and by them transmitted to their friends in other lands. Some preparation of opium or Indian hemp it may have been with which the beautiful Helen, after the siege was ended, once more in her lawful home, coming out of the 'sweet smelling lofty room chamber,' drove away sad memories from the minds of her husband and his friends by making them drink of wine into which she had cast a drug, chosen from the cunning and excellent stock presented to her by an Egyptian princess. Most potent drug this must have been, for we are told that it delivered men from grief and wrath, and caused oblivion from every ill."

Seeking relief from pain is certainly our province and our duty. We see that this idea has been handed down to us from the earliest antiquity, but whither are we drifting in its pursuit? You will observe from the history of these early times that people then and now in no way connected with the art or the practice of medicine prescribed and found others ever ready to swallow the potion regardless of its contents. There is or must be a charm or witchcraft in the act of prescribing, especially so for the other fellow, for this practice began at an early day and shows a steady growth all down through the ages until now. There is certainly nothing that we can imagine that so delights the laity as to prescribe something for the relief of a condition of which they are profoundly and totally ignorant.

PRETENDERS.

There is no profession which is more frequently used as a cloak by all kinds of mountebanks, charlatans and pretenders than is ours, and these pretenders too often prescribe for conditions concerning which they are ignorant. The medical profession is noble and beneficent in its aims, presenting more opportunities for doing good than perhaps any other, and yet within its ranks practitioners of the black art flourish on the credulity of the people with whom they come in contact. The medical profession offers a fertile field for men of this class, especially in this day of proprietaries and secret formulas, when little or no skill is required in writing or in filling a prescription.

USING PROPRIETARIES.

You might flatter yourself that only the ignorant and unlettered could become the victims of this class of medicine men, but in this you are sadly mistaken, for you will often have your pulse beat faster and your quiet indignation pitched to its highest point by seeing some of your most cultured people falling in line, possibly your best friend or your best patient.

Sir Dyce Duckworth, before a scientific body in London, England, recently stated that "the art of medicine is fast declining," and he links together, inadvertently no doubt, literary culture and scientific habit. The editor of *Hospital*, in same city, regrets that this should have been done, exclaiming that they are incompatible and adds, "Men of literary culture, but destitute of scientific training, furnish most conspicuous examples of incapability to observe accurately and of inability to reason correctly, which we witness every day in the world around us. They are the patrons of quack medicines and anti-societies; they are apt to dogmatize serenely concerning matters of the very elements of which they are profoundly ignorant."

This well illustrates my oft repeated statement that ours is a profession that none can know anything about save the initiated, and all of them unfortunately do not know. But whither are we drifting? I fear I tell but the truth when I say that, with the great commercial spirit of the day, we are drifting toward proprietaries and quack medicines. Some of us perhaps have anchored. To them I would say, cut loose from your mooring. We are not drifting into this habit altogether by preference or for the interest of our patients, but carelessness and ease, I think, are likewise responsible for part of it. This habit, insidious as it is, I believe our worst enemy. Samuel Hopkins Adams states, in *Collier's Weekly*, that "ignorance and credulous hope make the market for proprietary medicines."

I do not mean to imply that all proprietary medicines should be condemned. Many have been found useful, if their preparation requires greater skill or more complicated apparatus than your druggist possesses, and if the formulas are known and approved they should be used when indicated. Imagine yourself prescribing something that you know absolutely nothing about except what the genial detail man has told you. Imagine, again, if you will, that same gentleman telling you the indication for the use of the medicine that your case demands; you accept it and use the medicine suggested to you by this source. In doing so do you not lower professional standard, your own dignity and become the dupe of the manufacturer of the drug and the well-groomed agent who tells you in what class of cases to use it?

WHAT IS OUR DUTY?

The state of North Dakota has a law that prevents the sale of patent medicine (and this includes secret proprietaries), unless the formula is printed on the package; and Kentucky has a bill now pending to make a

similar law (presented by Hon. L. F. Johnson of Franklin County). I hope that a similar law will be enacted in all the states. If we were to do our duty, we would need no law to protect us and our patients whose lives are put in our keeping, and we should not under any conditions or circumstances prescribe a medicine that we were not absolutely familiar with.

I trust that the members of this society will join with me in resolving to use in the future only those drugs from which we can reasonably expect results, and, if possible, to have all remedies compounded by our own druggists. We should also notify the druggists that we shall accept only pure chemicals, such as those made by reputable firms. It is not our province altogether to find only palatable drugs. Let the homeopath have a monopoly along this line if he will; that which we most desire is results. Occasionally a medicine that is pleasant to the taste can have little or no therapeutic value, except for its mental effect on some of our most unfortunate cases. That we will appeal to the intellect rather than to the superstition, prejudice and ignorance.

I see each succeeding day signs of better things and that there is room for improvement no one can doubt, since it is estimated that over $100,000,000 has been expended annually for patent and proprietary nostrums. No wonder is it that legislatures are slow to enact laws to modify the sale of these "patents"; no wonder it is that the manufacturers of these miserable compounds are on the run, because at least $75,000,000 of this money must be profit, and if there is any one thing that will invite a keener interest than another it is the probable loss of money.

Then think what so vast a sum as this could and would do in influencing legislation that would be detrimental to this nefarious business. The manufacturers use every device known to the professional pirate and plunderer, such as threatening newspapers with loss of their advertising and appealing to retail druggists to help protect their property rights. These vendors want and demand our closest secrecy in protecting their rights, as they say. Afraid even to let the uneducated class of their countrymen know what they have been swallowing for all these years and for what they have paid so many honest dollars, notwithstanding the fact that these manufacturers know that the users of their medicines are, of all people, most gullible! I have seen it estimated that 75 per cent. of all the prescriptions that are written by the medical profession of this country call for proprietaries whose formulas are known and proprietaries whose formulas are secret, about one-half each. Is this not a shame when we know that many of the so-called proprietaries are no better than the rankest of the patents?

Let us see to it that we have a druggist prepare our prescriptions who is competent so to do; that we demand of him a square deal and only the purest medicines that can be had, asking no quarter from any source and showing none, save when compatible with the highest sense of duty to our patients and to ourselves, and lend our assistance in this campaign of education wherever and whenever we can be of service. Thus the people with whom we live and practice our art will have a higher regard for our ability and fidelity.

Corpora Aranti.—These structures in the brain are named after Giulio Cesare Aranzio (English, Aranzi; Latin, Arantius), an Italian anatomist, born at Bologna in 1530, died in 1589, according to the *Medical Book News*. He was professor of anatomy for thirty-two years in the university at Bologna, and physician to Pope Gregory XIII.

FOUR POINTS OF INTEREST IN MAJOR ANESTHESIA.

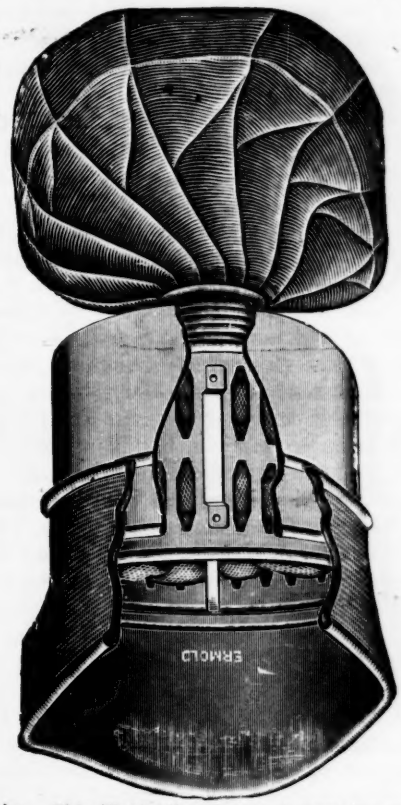
ROBERT H. M. DAWBARN, M.D.

Professor of Surgery, New York Polyclinic Medical School and Hospital. Surgeon to the City Hospital.

NEW YORK CITY.

The first of these points on anesthesia has to do with the use of ethyl chlorid prior to the administration of ether. Since the safety of this very pleasant method has been demonstrated it has rapidly grown in popularity. Dr. V. C. Pedersen, anesthetist to Roosevelt Hospital, has informed me that, unless otherwise directed by the surgeon, this is now always his preference instead of beginning the anesthesia with liquid laughing-gas.

Six months ago a certain New York firm informed me that hereafter they intended to manufacture their own ethyl chlorid instead of importing it; and, through their representative, asked my advice as to the best size of tube to supply. After som experimenting I advised



The inhaler. This illustration does not show the relative size of the thin rubber air-bag, which is large enough for the tidal air of the largest man.

a 5 c.c. tube. This is drawn to a fine point at one end, easily broken off and sealed by a blowpipe flame.

I also recommend the following method of usage: Assuming that the Clover air-bag principle of ether inhaler is the one to be used (the simple and cheap form known by my name and used for nearly 15 years at the City Hospital has never yet been followed by ether pneumonia), two or three of the 5 c.c. tubes of ethyl chlorid are wrapped each in an opened gauze sponge, with an elastic snapped about this jacket, and are then dropped within the air-bag. With the face-piece in position, the tip of one of these tubes is broken—through the rubber bag—and the anesthesia is at once commenced. Thus there is no waste, and the gauze wrapper prevents cutting the air-bag during breakage. If instead the tube be broken outside the bag and then

dropped within it, so rapid is the escape of this most volatile liquid that one is fortunate to secure the services of half the tube's contents.

If need be, the second and third tubes can be broken too. As soon as the patient is thoroughly asleep the ether-cage is slipped home in the face-piece, and gradually the ether anesthesia replaces that from the ethyl chlorid where a long operation is required.

Of course, where much more complicated and expensive ether inhalers are to be used, this tube of Squibb's is not indicated; and instead a spray of ethyl chlorid is directed into an opening in the inhaler for the purpose, from a large container. At present, however, we are assuming that the simpler kind of apparatus—which is presumably in use by a large majority of practitioners—is to be used. Chilling the lungs by ether continually poured on and using a towel-and-newspaper cone, or an Allis inhaler, is so obviously the chief cause of ether pneumonia that it would seem that the rebreathed, lung-warmed ether of the Clover air-bag principle should by to-day have commended itself to all members of the profession. If there be still some who differ, however, it may be worth while to add that all the experts in anesthesia in New York—I mean the men who do nothing else—are agreed on this point. This method also results in a great saving in ether, and the patient recovers more certainly and sooner, being far less saturated with the drug.

2. The second point to be mentioned is a means of preventing trouble from chloroform when this is used at night in presence of a naked flame in the room. Experience has shown that before the end of a long operation the surgeon and his assistants will be coughing in consequence of the chloroform becoming decomposed and giving off nascent chlorin. About fifteen years ago —perhaps more—it occurred to me to try hanging, not far from the lamp or gas jets, handkerchiefs dipped in ammonia. The resultant chemical affinity at once produces ammonium chlorid and prevents the cause of the coughing. Recently I mentioned this to Dr. Thomas L. Bennett, perhaps the best known of the men doing exclusively anesthesia work here, and he said he had never before heard of it. As I have not found it mentioned in a rather hasty review of text-books, I assume that at least this plan ought to be more widely known.

3. The third suggestion of this paper is far from original, but how forgotten it is in practice! I refer to giving the anesthetic during the natural sleep. In all possible instances of major operating during the earliest years let us select an hour which is regularly that of the child's daily sleep, and, entering the darkened room noiselessly, let us anesthetize so cautiously and gradually—using chloroform mask held far from the face, employing the drop method and being in no hurry—that the little sleeper only awakens when the operation is ended!

It makes an astonishing difference in the amount of chloroform required whether this safest of plans (and most neglected) is used, or whether instead the frightened child is awake, struggling and screaming. Also, be it remembered, it earns the mother's gratitude.

Although easy of accomplishment with chloroform and in childhood, during natural sleep, such anesthesia, using ether, is far more difficult, almost impossible indeed, and rarely can be done on adults at all.

4. The fourth and last of the four small points I wished to bring out—if, indeed, anything is small that makes at all for the patient's comfort or safety—is in reference to the advice which, without exception, one sees included in the instructions to the young anesthetist; namely, always to remove from the patient's mouth any plate containing artificial teeth.

In my opinion, there are exceptions to this, and the physician should be entitled to use his judgment. Obviously the plate should be removed when it is so small that, if dislodged, it might prove dangerous either by being swallowed or lodged in the gullet. In many instances, however, the patient is wearing a complete or nearly complete set or sets and possesses only an ordinary size of pharynx. In such cases, swallowing or choking on the plate is out of the question; and when it is taken out the cheeks and lips so fall in as to encroach, in some patients, to a serious degree on the breathing space within the mouth. This is worth remembering, especially when there chances to be much nasal obstruction, which is far from rare.

In a recent conversation with Dr. James T. Gwathmey, anesthetist to the City Hospital, I was pleased to observe that on this point he holds the same views.

ACCURACY IN DIETETICS.*

DUDLEY ROBERTS, M.D.
Associating Visiting Physician, Brooklyn Hospital.
BROOKLYN.

The general trend toward accuracy in many departments of medicine serves to emphasize the prevalent disregard for a similar advance in dietetics. The importance of carefully selecting the articles of food for certain cases is very generally urged, but not as commonly practiced. Although it would seem to be a subject of equal importance, but little stress is ever laid on the necessity of regulating the amount of food to fit the exact known demands of a particular individual. That the demands and hence the supply of food should vary with the weight, shape of the body, age and condition of activity has been too well proved to permit of question.

We can only account for the prevalent neglect of this factor in dietetic ordering by supposing that the matter has never been presented in practicable form. It is essential that the number of nutrients in a given food substance be quickly determined and that the patient receive instructions as to the amount of food in such terms as can be readily comprehended by the average invalid or nurse. Food weighing must be discarded, as it certainly can not be carried out in the ordinary household, public eating place or even in the average institution. Unquestionably we must consider not what is served, but rather what is actually eaten; otherwise one may be misled into making serious errors.

Fortunately the number of simple foods, the value of which it is necessary to know in order to prescribe a dietary to the class of cases that should have definite diet lists, is comparatively small; from these simple foods one can readily calculate the value of such compound foods as are ordinarily used in these diets. In the accompanying Table[1] 1 the most convenient unit of household measure has been taken and the food value of its content of food in the state in which it is eaten has been calculated; the value of the various articles in the raw state has been taken from the works of Atwater, Ruebner, Chittenden, Hutchinson and others. While these units may not at any time be exact, in a number of meals the deficiencies and excesses balance.

It is not contended that more than a small minority of patients need to be put on regular diet lists; very

* Read before the Medical Section of the Kings County Medical Society.

1. The author, on request, will furnish these tables of food supply and demands on a card of vest pocket size.

often dietetic treatment is demanded, but a few instructions as to the amount and kind of food or a few interdictions will suffice. There are, however, a considerable number of individuals afflicted with diseases of an acute nature, chronic gastrointestinal disease, chronic undernourishment anemias and toxemias who need absolute and accurate instruction as to the amount and kind of food that is desirable for them to take; if this be not done, dietetic treatment amounts to nothing, the patient being guided in the choice of food by convenience or passing whim.

In addition to the value of such a table as a ready means of arranging suitable dietaries, we would emphasize its value in calculating the amount of nutrition that has been taken by a particular individual. Even with many conditions to a slight degree, we may say that the weight of the particular individual and the amount of muscular activity indulged in largely conditions the number of calories required. This may be expressed as in Table 2, on the basis of an average person of 150 pounds weight.

TABLE 2.—FOOD DEMANDS OF ADULT PER DIEM.

CONDITION.	No. of calories to each 2 lbs. body wt.	Total Calories	Gms. proteid
At rest in bed.....	25	1800	72
Slight activity	30	2200	88
Light work	35	2600	115
Moderately hard work..	40	3000	120
Very hard muscular labor	45-55	3375-4100	135-160

The proteid demands of the adult under different conditions have been added to the above and the proteid, in terms of grams, is given in Table 1 for each food that has any import-

TABLE 1.—VALUES OF COMMON FOODS IN HOUSEHOLD MEASURES.

FOODS AS EATEN.	Actual Amount.	Household Measure.	Calories	Grams proteid.	REMARKS
Milk	8 oz.	a glassful	160	8.4	
Buttermilk and skimmed milk	8 oz.	a glassful	80	8.0	
Cream	8 gms.	a teaspoonful	20	0.2	
Condensed milk, sweetened	20 gms.	a heaping teaspoonful	50	1.8	
Condensed milk, unsweetened.	20 gms.	a heaping teaspoonful	30	1.8	
Cocoa powders.....	10 gms.	a heaping teaspoonful	40	2.0	
Chocolate powders.....	10 gms.	a heaping teaspoonful	90	1.2	Greater nutritive value depends on larger amount of fat.
Beef juices, beef tea, bouillon clear soup.....	5 oz.	a teacupful	5-30	1-3	
Proprietary beef fluids.....	8 gms.	a teaspoonful.	1-10	4-2	
Beef and egg powders.....	10 gms.	a heaping teaspoonful	30	8	
Thick or cream soup.....	8 oz.	a soup-plateful	100-250	.....	Nutritive value increases as the thickness is made greater by proteid or carbohydrate addition to milk.
Alcohol	1 gm.		7		
Whiskey, brandy, etc.	1 oz.		85		
Wines	1 oz.		15-40		
Sugar	10 gms.	a heaping teaspoonful	40		
Eggs, whole	50 gms.	one	70		
Eggs, yolk		one	55	2.4	
Butter	10 gms.	a one-inch cube	65	0.6	
Cheese	10 gms.	a one-inch cube	45	3.0	
Meat and fish, lean.....	50 gms.	heaping tablespoonful	60	12.0	¼ lb. of lean steak will thus give 185 calories an ordinarily generous portion of rib-roast with moderate fat about 225 calories.
Meat, medium fat.....	50 gms.	heaping tablespoonful	100	7.0	
Meat, very fat.....	50 gms.	heaping tablespoonful	150	4.0	
Oysters, small	8 gms.	one	3	.5	
Oysters, very large	25 gms.	one	10	1.5	
Bread, slice, 4x4x½ in. thick.	25 gms.	one slice	50	1.5	
Crackers	3-10 gms.	one	12-30	.3-.6	
Cereals, in cooked state....	30-40 gms.	a teacupful	110-150	3-5	A cupful equals a saucerful; a bowlful equals 2 cupsful.
Cereals, eaten as purchased	5-7 gms.	heaping teaspoonful	18-25	.5-.7	
Shredded wheat.....	30 gms.	one	100	3.	
Triscuit	15 gms.	one	50	1.5	
Peas, fresh or canned.....	35 gms.	heaping tablespoonful	25	2.0	The apparent low value due to large amount of water.
Peas, dried	25 gms.	heaping tablespoonful	100	6.0	A tablespoonful of dried peas to a plateful of soup.
Beans, dried	25 gms.	heaping tablespoonful	90	5.0	
Beans, fresh or canned.....	30 gms.	heaping tablespoonful	30	1.0	
Potatoes—medium size.....	90 gms.	one (3 inches long)	80	1.0	
Jelly, sweetened.....	.....	a teacupful	50-120	.....	Value depends on amount of sugar and gelatin used.
Apples	100 gms.	one	40	.2	
Oranges	125 gms.	one medium size	60	.5	
Bananas	50 gms.	one medium size	45	.7	
Dried fruit, prunes, etc....	100 gms.	medium size saucerful	100-200	1-2	Value depends largely on the sugar used as preservative.

the ignorant can tell with a certain degree of accuracy the amount of food ingested in these simple household measures of bulk; from these estimations given by the patient one can quickly calculate the nutrients ingested and compare them with the bodily needs of the particular individual. This is often a matter of the greatest importance in deciding whether such symptoms as loss of weight and strength and poor general condition are due to deficient intake of energy or to some pathologic condition exhausting the bodily energy.

By the term caloric estimation of food is meant the calculation of the energy contained in terms of the large heat unit, the large calorie, the amount of heat it takes to raise the temperature of one liter of water one degree centigrade. We know that one gram of fat when completely oxidized gives rise to about nine such calories; one gram of carbohydrate or proteid to four calories. While the demands of the body vary ant content. It will be noticed from the above that I accept the teaching that 16 per cent. of the nutrients ingested by the adult should be proteids. In Table 3, to the tabulation by Atwater I have added the necessary number of grams of proteid per diem; it will be seen that the ratio here of tissue building proteids to the distinctly fuel foods—the fats and carbohydrates—is different from that which obtains in a proper adult diet, the calories supplying 10 per cent. of the nutrients.

TABLE 3.—FOOD DEMANDS OF THE CHILD.

AGE.	Proportion of food of adult at moderate work	Calories	Gms. proteid
Under 2 years.....	30 per cent.	900	42
3-5 years	40 per cent.	1200	55
6-9 years	50 per cent.	1500	70
10-13 years	60 per cent.	1800	85
Boy, 14 to 16 years.....	80 per cent.	2400	115
Girl, 14-16 years.....	70 per cent.	2100	100

84 Remsen Street.

Special Article

THE PHARMACOPEIA AND THE PHYSICIAN.

CHAPTER XVII.

CIRCULATORY DEPRESSANTS.

The circulation may be depressed by acting on those structures the stimulation of which causes an increase in blood pressure. Hence we might divide these agents into two groups: 1. Those acting on the heart mainly, directly or through the centers. 2. Those acting for the most part on the vessels, directly or indirectly.

An agent which slows the heart without causing a compensating increase in the strength or the amplitude of the contraction, or a constriction of the vessels, must cause a fall in the arterial pressure, as will be readily understood by reference to what has previously been said in regard to acceleration of the heart causing a rise in pressure. Here, too, we have in every case a combination of effects, and the resulting change in the circulation must depend on the predominance of one or another. As a matter of fact, we have no circulatory depressant which is used therapeutically to slow the heart by direct action on the myocardium, but there are a number which induce slowing by indirect action.

Aconite.

Therapeutic doses of aconite cause slowing of the heart by stimulating the vagus center, without materially affecting the strength of the individual contractions or the condition of the vasomotor center. The result, therefore, is a fall in arterial pressure.

The lessened cardiac action is accompanied by a decline in the temperature, whether this was previously normal or that of fever. This effect is commonly ascribed to the change in the circulation, but it nas not been proved that the heat regulating center is not involved in the action.

It will be noticed that the effects of digitalis and aconite on the circulation are diametrically opposed, except for the slowing of the pulse rate, which both induce.

Toxic doses of aconite act directly on the heart, causing acceleration with diminished force of contraction. In mammals the acceleration is prevented for a time by the vagus stimulation, and the heart is actually slowed, but in reality only a therapeutic dose has been absorbed in the early stage of the action; this stimulation rapidly gives place to depression and then to paralysis of the center, the acceleration becoming marked and being soon followed by great irregularity. Delirium cordis occurs before the heart stops in diastole.

Paralysis of the respiratory center is usually the immediate cause of death, hence atropin is capable of saving a certain percentage of animals experimentally poisoned with a barely fatal dose of aconite. If an excessive dose has been taken even artificial respiration will prolong life only for a short time as the heart soon becomes paralyzed after the phenomena enumerated above.

Despite the fact that it was well known and long in use as a familiar poison, particularly for wild animals, aconite is a comparatively recent addition to our materia medica, having been introduced by an Austrian physician, Störck, about 1762.

The official preparations of aconite are as follows:

ACONITUM.—U. S.—This is the dried tuberous root of *Aconitum napellus*, collected in autumn. When assayed by the process given in the Pharmacopeia it yields not less than 0.5 per cent. of aconitin.

Average dose: 0.05 gm. (1 grain).

FLUIDEXTRACTUM ACONITI.—U. S.—This is made with a mixture of 75 parts of alcohol and 25 parts of water and should contain 0.4 per cent. of aconitin.

Average dose: 0.05 c.c. (1 minim.)

TINCTURA ACONITI.—U. S.—This preparation has been materially reduced in strength and now represents 10 per cent. of the crude drug, or approximately one-third of the strength of the tincture that was official in the Pharmacopeia for 1890.

It may be added that the change was made in conformity with the recommendations of the international conference for the unification of formulæ of potent medicaments and that, in addition to being in harmony with this international standard it will be found to be more uniformly active than the stronger but more variable tincture official in the earlier pharmacopeias.

Average dose: 0.6 c.c. (10 minims).

ACONITINA.—U. S.—This is an alkaloid obtained from aconite. It is the most active and most potent substance in the Pharmacopeia. The aconitin now official is the crystalline alkaloid and should not be confounded with the amorphous substance formerly official or the comparatively weak eclectic preparation of aconite.

Average dose: 0.00015 gm. (0.15 mg. 1/400 grain).

Aconite finds its greatest usefulness in cases of high blood pressure with a strong, rapid heart, particularly in fever in robust patients. It then simply slows the heart, lessening its output and causing a fall in temperature and in arterial tension.

Fever alone is not an indication in every case for the use of aconite. In continued fevers and in any case in which the heart is feeble or the arterial tension low from any cause (even though the pulse may be rapid), aconite is contraindicated.

Since the antipyretic benzene derivatives have come into general use the employment of aconite in fever has correspondingly declined, but we have seen that the synthetic antipyretics are far from being the harmless substances that the manufacturers would have us believe, and aconite deserves to be used more frequently in suitable cases of fever.

"Colds" are troublesome forms of congestion resulting from circulatory disturbances which are often relieved by repeated small doses of aconite. For this purpose 3 drops (about 1 minim) of the tincture of aconite of the present Pharmacopeia, which would be equivalent to about 1 drop (1/3 minim) of the tincture official in the Pharmacopeia, 1890, well diluted with water, may be given every fifteen minutes for two hours, then hourly until relief is obtained.

Aconitin is so intensely irritant that it is not suitable for use without great dilution, and as there is some chance of confusing the much more potent article now official with the eclectic or the amorphous preparations, it will be found preferable to use the tincture of aconite in nearly every case, more particularly since this is now required to be of a definite aconitin strength. Because of its irritant action aconitin is not adapted for hypodermic use, but it may be given, largely diluted with water, as follows:

℞. Aconitin (crystalline) ..... gr. 1/12 |005
Alcoholis ..... ʒiv 15|
Aquæ q. s. ad ..... ʒiv 120|
Sig.: A teaspoonful may be taken every three hours.

The disadvantage, not to say danger, of trying to weigh such small amounts is apparent, and serves to illustrate the advantage of using the tincture.

The tincture is usually given alone, except for the water used in diluting it.

Veratrum.

Veratrum rather closely resembles aconite in its therapeutic action, and it was widely used at one time for the reduction of fever. The extent of its use was largely due to its popularization in the form of Norwood's Tincture of Veratrum, but it seems to possess no advantage over aconite, and it is now but seldom used internally. The official preparations are:

VERATRUM.—U. S. (VERATRUM VIRIDE.—U. S. P., 1890)—Under the single heading veratrum the Pharmacopeia now recognizes the dried rhizome of *Veratrum viride* or of *Veratrum album*. While it is true that there is no marked difference between the two drugs some physicians prefer the American root and therefore should specify "Veratrum viride, U. S. P., 1890."

Average dose: 0.12 gm. (2 grains).

FLUIDEXTRACTUM VERATRI.—U. S.—This is directed to be made with alcohol.

Average dose: 0.1 c.c. (1½ minims).

TINCTURA VERATRI.—U. S.—This preparation represents 10 per cent. of the crude drug in alcohol and is practically one-fourth the strength of the corresponding preparation in the Pharmacopeia for 1890.

Average dose: 1.0 c.c. (15 minims).

VERATRINA.—U. S.—This is a mixture of alkaloids obtained from the seeds of *Asagræa officinalis*. Veratrin should not be confounded with the eclectic preparation of the same name.

Average dose: 0.002 gm. (1/30 grain).

The Nitrites.

The nitrites, organic as well as inorganic, lower the blood pressure by causing vasodilation. Therapeutic doses exert but little influence directly on the heart. It has been shown that the nitrites act on the muscles and nerve endings of the arterioles, and that even the veins undergo dilatation.

Any considerable dilatation of the arterioles and veins of the splanchnic area must inevitably lead to a decline in the general arterial pressure, regardless of the action on the heart. In man the heart actually does show acceleration in the first stage of the action with amyl nitrite because of the depression of the vagus center; the blood pressure remains high and the vasodilation affects the face and neck, because of depression of the vasoconstrictor centers for those areas; but as the dilatation extends to the splanchnic and other areas the general arterial pressure falls.

There has been some diversity of opinion in regard to the effect of amyl nitrite on the cerebral circulation. Leonard Hill agrees with those who believe that there are no nerves controlling the diameter of the cerebral arteries, and he declares that the arterial pressure in the brain simply follows that in the carotids. Wiggers has found that adrenalin constricts the cerebral vessels and we have Elliott's dictum, based on his masterly research, that the constrictor effect of adrenalin on vessels is proof of sympathetic nervous control. Brodie and Dixon also found that the action of adrenalin is exerted on nervous elements. Should Wigger's results be confirmed there would be little reason to doubt that the nitrites do effect the caliber of the cerebral vessels.

The nitrites are capable of causing some dilatation of the vessels in excised muscles when the nerve endings are not concerned; hence they must also act on the muscular elements of the vessels to some extent.

The nitrites produce methemoglobin in the blood, but do not cause the destruction of the corpuscles, as other methemoglobin formers do, and in man this does not arrest oxidation completely, because the tissues reduce methemoglobin slowly. This is not an important factor, however, with the therapeutic doses of the nitrites.

O. Loeb suggested as a possible explanation of the value of amyl nitrite in angina pectoris that the coronary vessels, like those of the face and brain, may be dilated at first, before the action on the general circulation begins. Filehne showed that the therapeutic dose of amyl nitrite caused vasodilatation by central action, and Loeb found it did not affect the vessel tonus independently except when in such concentration as to prove poisonous. Small doses were found to have no constant effect on the vessels of the coronary circulation in the excised heart. Amyl nitrite acts very rapidly when inhaled, but the action is over in about twenty minutes.

The effects of glyceryl trinitrate or nitroglycerin are much more slowly induced and they persist for some hours. Sodium nitrite is decomposed by the hydrochloric acid of the gastric juice thus giving rise to irritation of the stomach. Glyceryl trinitrate is not decomposed in the stomach, but it has the disadvantage of often causing headache. In some cases this action does not occur after the drug has been used for some time. Glyceryl trinitrate is decomposed in the blood, with the liberation of the nitrous acid radicle, hence it acts like the nitrites.

SPIRITUS GLYCERYLIS NITRATIS.—U. S. (SPIRITUS GLONOINI —U. S. P., 1890)—Commonly, though incorrectly, termed nitroglycerin, is an alcoholic solution containing 1 per cent. by weight of glyceryl trinitrate.

Average dose: 0.05 c.c. (1 minim).

AMYLIS NITRIS.—U. S.—This is a liquid containing about 80 per cent. of amyl nitrite.

Average dose: 0.2 c.c. (3 minims).

SODII NITRIS.—U. S.—This usually occurs in white, or nearly white, fused masses, soluble in less than two parts of water. The salt deliquesces on exposure to air and is also gradually oxidized to sodium nitrate and thus becomes unfit for use.

Average dose: 0.06 gm. (1 grain).

The nitrites, including glyceryl trinitrate, are of prime importance in the depression of the circulation and may be used, when it is deemed necessary, to lower the blood pressure, for example, when a weakened heart is becoming exhausted by contracting against a great arterial resistance, and the contractions are incomplete, as in arteriosclerosis. A slight lowering of the aortic resistance often enables the heart to contract more perfectly while a coronary vasodilation secures a better nutrition of the heart.

This group is contraindicated, however, when the blood pressure is already low (however weak and rapid the heart may be), because a certain degree of arterial tension is absolutely essential for maintaining the coronary and medullary circulations.

Amyl nitrite is to be preferred when a speedy action is desired, as in acute attacks of angina pectoris. When the constriction of the vessels is of spasmodic origin the nitrites usually give relief, but in the latter stages of arteriosclerosis, when most of the muscular tissue has been replaced by fibrous, thus narrowing the lumen of the vessels, it is obvious that such vessels cannot be caused to dilate by any means.

It must not be forgotten that while relief is often obtained in the acute attacks of the early stages of angina pectoris, the nitrites are merely palliative and in no sense curative. The nitrites, and more particularly amyl nitrite, are indicated in vasomotor spasm occurring in any disease, unless specifically contraindicated by other conditions.

The action of amyl nitrite is very speedily elicited when it is inhaled, but when spasm of the respiratory muscles interferes with the inhalation it may be injected into the deep muscles of the thigh.

Spirit of glyceryl trinitrate is to be preferred in chronic conditions of abnormally high blood pressure, because of its more protracted action. One minim is given three times a day, or the dose is increased till effective. It may be injected hypodermically or given by the stomach, as it passes through that organ unchanged, and, therefore, causes no such disturbances as are seen with sodium nitrite.

While this substance is usually considered as being extremely poisonous it is said that more than 12 c.c. (3 fluidrams) have been given in the course of a day with no bad effects. Aqueous solutions of glyceryl trinitrate are unstable and are frequently quite worthless. The spirit sometimes gives almost immediate relief in headache, when this is attended with high blood pressure, but, on the other hand, it may increase the headache if the blood pressure is low. As is well known, the headache which glyceryl trinitrate commonly causes is one of the greatest objections to its use.

The nitrites, and particularly the spirit of glyceryl trinitrate, may be used to counteract the vasoconstrictor effect of digitalis or strychnin when that action is undesired.

Because of its ready decomposition spirit of nitrous ether does not yield enough of the nitrous acid radicle to exert any therapeutic action on the circulation. The action of the spirit is exerted reflexly as in the case of alcohol and ether.

The spirit of nitroglycerin may be given in simple solution in order to avoid the measuring of such small doses as one minim. It may be prescribed as follows:

℞. Spiritus nitroglycerini.....m. xv 1|
Aquæ .....ʒii 60|

The dose of the solution is a teaspoonful. Large amounts should not be prescribed or dispensed.

The following illustrates the method of prescribing sodium nitrite:

℞. Sodii nitritis.....gr. xv 1|
Aquæ (recently boiled).....ʒii 60|

This solution should be kept well corked. The dose is one teaspoonful.

The well-known "pearls" of amyl nitrite afford the most convenient form for dispensing that substance; they must be kept cool to avoid loss by breakage, and when used one is crushed in a handkerchief and the contents inhaled by the patient at once.

Bloodletting was formerly in vogue as a routine procedure when it was desired to reduce the blood pressure, but in healthy animals the vasomotor center exercises such perfect control over the blood pressure that the loss of blood produces very little lasting effect unless it is so great as to cause collapse symptoms. While the loss of a moderate amount of blood is well borne by robust patients, and in some cases may even prove beneficial, aconite and the nitrites are nearly always to be preferred as temporary measures, while the control of the diet (including liquids) and the use of saline purgatives will serve to diminish the amount of blood for a longer time in suitable cases.

Chloral hydrate is one of the most effective agents in our possession for lowering the blood pressure by depressing the vasomotor centers and while this action is much employed in laboratory experiments, it is not elicited in man by perfectly safe doses such as are used to induce sleep.

Clinical Notes, New Instruments, Etc.

A PECULIAR INFECTION OF CERTAIN CERVICAL GLANDS WITH TYPICAL LOCAL AND GENERAL SYMPTOMS.

HELIODOR SCHILLER, M.D.

CHICAGO.

Under the title of "Pfeiffer's Glandular Fever" I recently published reports of five cases and I have since had an opportunity of seeing six similar cases.[1]

A close study of these cases and comparison with those already reported, shows that they do not correspond exactly with the cases described by Pfeiffer, but that they have distinctive features which may be considered as those of a well characterized and typical disease.

CASE 6.—On October 24 I was called to see a baby boy, aged 2½ years. Since the previous evening the child had had fever, had coughed somewhat and had vomited once.

Course of the Disease.—When I first saw the child his temperature was 102 F., his throat was reddened and several râles could be heard over the lungs. He was constipated, and for this calomel was given. Next morning the temperature was 99.8, and the following day 103. The redness in the throat had disappeared entirely on the fourth day and the temperature was 101, with no other symptoms. On the fifth day the glands on the left side of his neck, especially those before and behind the proximal end of the sternocleidomastoid, were very much swollen. The swelling came on rather suddenly; on the previous day there was no trace of it, and it consisted of three enlarged glands, each larger than a hazelnut, and of the consistency of hard rubber. Each swollen gland was distinctly palpable. The skin over the glands was normal, the glands were hardly tender, and somewhat painful only on hard pressure.

Cultures taken from the throat and from the seropurulent discharge from the nose on the second day showed streptococci and staphylococci. Throughout the disease the temperature ranged from 101 to 104.5. There was no exanthema on the skin or scalp, and nothing abnormal in the ears.

On the tenth day the glands on the right side of the neck were found to be swollen and showed the same characteristics as the glands on the other side. This swelling was followed by higher fever and vomiting. Adenoid vegetations in the throat were present in a slight degree. Constipation was obstinate and the child lacked appetite.

On the eleventh day the baby complained of pain in the ear, but nothing pathologic could be seen there. The liver and spleen were both found enlarged, and the mother noticed that the urine, which on the eighth day was normal, was lessened in quantity on the twenlfth day. It was found to contain albumin and some white and red blood cells. On the sixteenth day there were traces of albumin only.

The fever continued for three weeks and a half, reaching as high as 104.6 degrees, but in spite of this the baby did not look very emaciated. The glands swelled more; I had the impression that they were smaller on some days, but the day following they would seem as large as before. The fever disappeared gradually and at the end of the fourth week it was gone. The glands became gradually smaller. When the temperature became normal the appetite came back, the baby recuperated quickly, and by December 15 the glands were reduced to the size of a small pea. Dr. Abt saw this case with me.

SUMMARY OF CASE 6.

At no time was any fluctuation felt; the glands were always movable, there was no periadenitis. The teeth were normal and there is no history of tuberculosis in the family. There was no sign of scrofulosis nor was there any symptom which would alow me to consider the case as an acute tuberculous infection of the glands. It is known that in cases of acute infection of glands with tubercle bacilli, with the formation of a large amount of epithelial cells, and consequent infiltration with round cells, the glands may swell in a comparatively short time, considering the chronic character of the tuberculous disease. These glands may swell to double their size inside of a week or ten days, but never over night; besides, the more acute tuberculous infections of the glands are invariably followed by caseous degeneration, and then by suppuration, whereas in the case just referred to absorption took place.

The so-called hypertrophic form of tuberculous glands most often disappears by conservative treatment, but it comes on very slowly and its course is contrary to the one here described. It is afebril, and other symptoms tending to tuberculosis will not be missing. In this case there was sudden onset of fever, weak feeling, headache, backache, and then the sudden and large swelling of the cervical glands, which are not painful, but only slightly tender, and hard in their consistency, swelling of the spleen and of the liver, nephritis, constipation, mouth-breathing, decline of the fever by lysis, slow absorption of the inflamed glands and slow disappearance.

We can not very well call this a case of common tonsillitis, because the pathologic changes which the tonsils and the throat showed, were very little. The sympathetic swelling of the glands in a case of tonsillitis is different, the glands are painful and disappear with the disappearance of the process in the throat or suppurate. Also the affection of the kidneys, spleen, and liver, in so marked a degree, and the long lasting fever are certainly not the symptoms of tonsillitis.

CASE 7.—A woman, aged 34, called on me September 14. She said that on September 9 she felt ill, had a headache, pain in the back, was very weak, and that toward evening she noticed a swelling of the glands on the left side of her neck. She believed that this swelling, which was not painful at all, came from her teeth, but her dentist failed to find any reason for trouble from that source. A physician who paid a friendly visit prescribed a liniment, which was used without result, and the swelling grew constantly, but did not cause any trouble. At no time was there any pain in swallowing, or very much pain in the swollen glands, except in quick movements of the head.

Examination.—When I saw the patient the temperature was 100, pulse 88. On the left side of the neck there was a glandular tumor the size of a child's fist, composed of two distinctly separated glands before and below the proximal part of the sternocleidomastoid. This swelling was hard and elastic and not very tender. The heart and lungs were normal; the liver was somewhat enlarged. The tonsils were enlarged with deep but empty crypts. The palate and pharynx were reddened,

1. The Journal, A. M. A., Aug. 5, 1905, p. 401. The cases reported in this article are numbered consecutively following those reported in the previous article.

there was no skin affection, the ears were normal, urine was normal, and the patient complained of weakness and nausea.

Course of the Disease.—On September 16 the temperature went to 103, and on September 17 to 103.5. The glands were still hard but movable; there was no fluctuation and no marked periadenitis. On September 18 I made a trial puncture and at the depth of more than an inch I found a thick yellow pus, which I removed by incision. That evening the temperature went to 104.4, and then gradually subsided and was normal on September 21. On September 26 the incision was healed, but the glands were still enlarged, though very much reduced in size; the patient felt fine and began to gain.

On the evening of September 26 I was called to her, and, to my surprise, I found the glands just behind the sternocleidomastoid in its upper part swollen, and one gland in the middle of the neck also swollen to about the size of a nut, hard and not very tender. The whole thing came on in a few hours; the temperature rose to 100.6 and the pulse to 96. There was no pain except in moving the head; the throat was normal, but a general weakness was felt.

On September 27 the condition was the same, the highest temperature was 101, and the urine contained traces of albumin. The fever increased and the swelling of the glands was the same.

On September 30 I again made a trial puncture, and found one-third of a Pravatsche syringeful of pus in the gland behind the sternocleidomastoid. I made an incision along the needle, but found no more pus.

The temperature gradually subsided and on October 6 it was normal once more, but the swelling did not decrease in size, though there was no fluctuation. Trial punctures revealed no pus. On October 26 I advised *x*-ray treatments, and after ten treatments with medium hard tubes at 10-inch distance and ten minutes' exposure by Dr. Reichman all the glands disappeared. In the pus of the glands typical influenza bacilli and streptococci were found. The blood examination showed leucocytosis 13,000.

SUMMARY OF CASE 7.

The objection could be raised that the process was nothing but a common tonsillitis. Not all cases of tonsillitis are followed by pain in the throat, the affection in the throat or tonsils is accompanied by large yellow plaques, is very often found there by change, and patients do not always complain of pain there. The changes in the tonsils could have disappeared quickly, but the whole course of this disease is not at all similar to any of the hundred varieties of tonsillitis; the sudden swelling of the glands, their consistency, the slight tenderness, the increase in size after the supposed process in the throat disappeared, the finding of influenza bacilli in the pus, and the lengthy duration of the process are enough to show that we have to deal with a well characterized, distinct disease.

CASE 8.—A girl, aged 2½ years, the daughter of the patient in Case 7, five days after an attack of rhinitis and pharyngitis, which lasted two days, complained of pain in her ears and neck, and vomited once or twice.

Examination.—The tonsils were red and somewhat swollen. There was a seropurulent discharge from the nose; the ear drums were somewhat retracted; the lungs and heart were normal. The child was healthy looking and seemed to be a well nourished, strong baby. In the discharge from the nose staphylococci and large diplococci were found, but no diphtheria bacilli were demonstrated in the specimen taken from the throat.

Course of the Disease.—The next morning the glands on the left side of the neck, on both sides of the upper end of the sternocleidomastoid were swollen to the size of a hazelnut, being hard, not very tender and movable. The child was constipated, breathed through her mouth and was very cross. The redness in the throat disappeared in two days, but there was no change in the course of the disease.

On October 13 a thick pus was removed by an incision from one of the glands, and in the pus were streptococci only. The other glands, which did not suppurate, remained about the same.

By October 20 the incision was healed. Then rather suddenly, without any symptoms other than temperature of 101, the symmetrical glands on the right side began to swell, traces of albumin were found in the urine, and the temperature kept rising until October 30, when the spleen and liver were distinctly enlarged. The glands on the right side were easily movable, hard, elastic, with the skin above them perfectly normal, and they remained about the same.

After the disappearance of the fever the child improved quickly, the glands became smaller and in the beginning of December they were reuuced to the size of small peas.

CASE 9.—The servant in the family had a very similar but much milder affection.

CASE 10.—This was a case belonging undoubtedly to this species, but was very mild, though showing all the symptoms.

CASE 11.—This patient, a boy, 7 years old, had had a cold for several days, and suddenly, on the evening of November 8, it became worse. He had headache, felt weak and complained of pains, especially in the abdomen, but also to some extent all over.

Course of the Disease.—Temperature was 100.8, pulse 102. His throat was red, and the next morning the glands on both sides of the neck were swollen, but the right side was the worse. Except for a slight fever and the swelling of the glands, no other symptoms were present, the throat being normal and the highest temperature 100.8. The boy felt well, had a good appetite and did not want to stay indoors. After the fever disappeared the glands became somewhat smaller. There was no exanthema, no peeling of the skin.

On November 24 the boy did not act normally, and the mother observed that there was blood in the urine. A specimen showed all the signs of an acute hemorrhagic nephritis. During the next twenty-four hours 11 ounces of bloody, dirty-looking urine were passed, and the next day 15 ounces. In spite of this the boy felt well and did not believe that he was sick. His temperature was 100; the spleen and liver were enlarged.

On November 26 the urine, 56 ounces, contained albumin, granulated and epithelial casts and cubic fatty degenerated epitheliums.

On November 30 the urine contained traces of albumin, only at this time also the glands were very much reduced in size, and the latter part of December had nearly disappeared.

SUMMARY OF CASE 11.

In this case there was not one symptom of common tonsillitis. Of more importance in this as well as in the case of the little girl is the "cold," which may have been the source of the infection of the glands. The patients hardly felt sick, the only symptom in the beginning of Case 11 was the swelling of the glands and a slight fever, scarlatina could be excluded.

SUMMARY OF ALL CASES.

I have observed eleven cases of a well-characterized disease. The most striking and characteristic symptom of which is the sudden swelling of certain glands of the neck. In Case 1 the swelling of the glands was noticed the evening before any pain in the throat started. The enlarged glands in Case 2 were observed by the mother before the boy complained of any pain in the throat or neck, and in Case 3 immediately after the first chills the glands were observed to be swollen.

In Case 6 the swelling appeared on the fifth day, while in Case 7 the swelling of the glands was observed on the evening of the day when the patient first felt sick; the second swelling of the glands came as a surprise to both patient and doctor, and was the first symptom of the relapse.

In Case 8 the swelling occurred on the second or the

fifth day, respectively. In Case 11 the glands swelled the second or the fifth day—according to whether we count the "cold" in the disease or not. In neither of these cases was the swelling of these glands accompanied by any severe pains. The glands were not tender, but were hard, they showed no marked periadenitis and what must be considered as especially characteristic, the swelling concerned most often the glands anterior and posterior to, and behind the upper end of the sternocleidomastoid only. This rule had only one exception. In Case 7 the disease opened with chills, headache, pains in the abdomen, back, and sometimes vomiting. Complaints of some pain in the throat were present in all cases. In no case were the pains so severe as in a case of real tonsillitis.

The affection of the kidneys in this disease is rather striking. Among eleven cases three patients had acute hemorrhagic nephritis. The nephritis began in one case on the fifth day, in another on the seventh, and in the third on the eleventh day after all symptoms had disappeared and the glands had begun to get smaller. There is no other disease, except perhaps scarlatina, known in the course of which the kidneys become as severely involved as in this disease. Case 7 the patient had, besides small quantities of albumin, white and red blood cells and cubical epithelium in the urine. Traces of albumin were found in nearly all cases, even when the fever was low. The spleen and liver were somewhat enlarged in all cases, the spleen so much so that it was easily palpable, and the liver one inch below the ribs. Pain in the abdomen was a frequent complaint, and constipation a regular one. Adenoid vegetations were found in five of the cases. Characteristic for all cases was the lengthy duration of the swelling and the slow absorption. In three of the cases suppuration of the glands occurred. All cases were accompanied by fever, but in one case only did this reach as high as 105 degrees, while in the other cases it ranged between 100 and 104. It was a continual fever and disappeared by lysis.

The bacteriologic examination of the pus of three cases showed as follows: In one pure cultures of influenza bacilli, in the second influenza bacilli and streptococci, while in the last streptococci only were found. In Case 1 streptococci were found in the throat; in Case 3 influenza bacilli, diplococci and staphylococci; in Case 8 staphylococci and large diplococci; in Case 6 streptococci and diplococci.

The diseases had all the characteristics of an infectious disease, Cases 7, 8 and 9 would even justify one in calling the disease contagious. The prognosis is good in all cases. In Case 2 only, I felt uneasy for several days.

92 State Street.

A SIMPLIFIED HEAT METHOD OF STERILIZING AND STORING CATGUT.

WILLARD BARTLETT, A.M., M.D.

ST. LOUIS, MO.

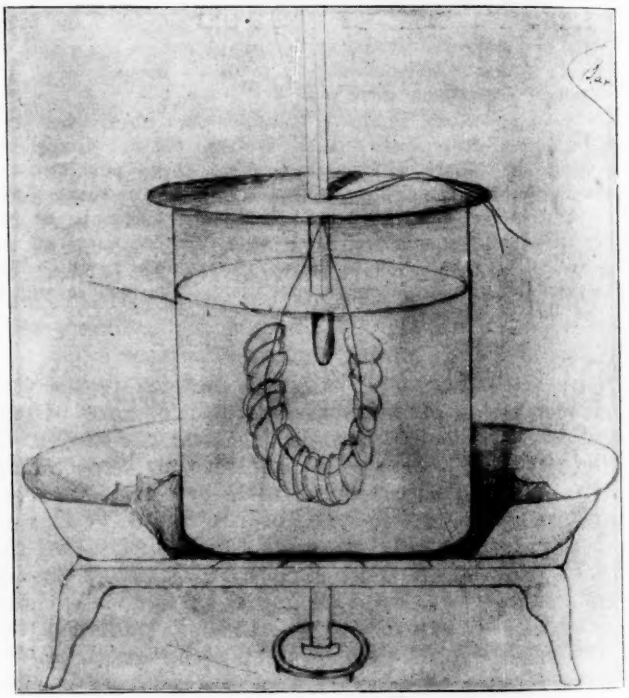
So many prominent surgeons have adopted my suggestions for the preparation of catgut[1] that I wish to describe methods which make the procedure vastly simpler in its application, and which at the same time remove any element of uncertainty regarding the results likely to be attained.

Catgut prepared according to this formula has been used by the Mayo brothers in almost 5,000 operations and has been adopted by such well-known surgeons as Drs. Burrell, Collins, Cushing, Deaver, Finney, Frazier, Meyer and Murphy, as well as the men on the staff of the Massachusetts General Hospital and on that of the Pennsylvania Hospital and many others. This is a sufficient testimonial to the worth of the procedure, and I am more than certain that the present modification of it here described can not fail to attract new users.

As at present recommended very little time or trouble need be expended in carrying out the preparation of catgut. The materials used are exceedingly cheap, while the requisite apparatus, as shown in the acompanying illustration, is very crude and can be found in any hospital or in any physician's office.

The process can be divided into three steps: (1) The physical preparation of the material, (2) its sterilization, (3) its storage.

1. The ordinary commercial ten-foot catgut strand is divided into four equal lengths, each of which is made into a little coil about one and one-half inches in diameter. By twisting the last free end about four times around this little coil the latter will maintain its shape. These coils in any desired number (I usually take about 120 of them at a time) are strung on a thread like beads on a string in order that the whole number may be handled at once. This string of coils is hung in a metal can, better still in a beaker glass, but is not allowed to touch



the bottom or sides. I suspend them by carrying the two ends of thread through a small opening in a pasteboard cover, which is placed on the receptacle. The same opening serves to admit a thermometer, which is carried down to exactly the point where its mercury bulb is on a level with the topmost coils. Liquid petrolatum is now poured in, the quantity being sufficient to immerse the catgut and the bulb of the thermometer.

2. The vessel is set on a pan of sand, under which is placed a tiny gas flame of merely sufficient intensity to raise the temperature of the oil to 212 F. within from one to two hours. A little practice enables one to guess the size of flame necessary for this purpose. This is best done in the evening, and the temperature allowed to remain at about 212 F. (a few degrees variation does not matter) until morning. The heat is then increased to such an extent that the temperature will run up to 300 F. in an hour; the gas is then turned off and the temperature of the oil allowed to return to about 212 degrees.

3. The pasteboard cover, together with the string of catgut coils, is lifted off, the superfluous oil is allowed to drop off, and then the thread is cut, allowing the coils to drop into the following mixture:

Columbian spirits	100 parts
Iodin flakes	1 part

1. "A Simple Heat Method of Sterilizing and Storing Catgut—Preliminary Report." Interstate Med. Jour.

The catgut is now ready for immediate use and will keep without deteriorating for any length of time. The jar may be opened any number of times, so long as a sterile instrument is used for removing the coils, since the iodin protects the coils that are left behind from accidental contamination.

The physical qualities of catgut so prepared will astonish the surgeon who uses it for the first time. I am very certain that a blind man used to handling catgut prepared by other methods would not recognize this product if it were placed in his hands. It is as supple as silk, highly elastic and almost as strong as the raw material. It is easily seen on account of its color, will not untwist when it gets wet on account of the oil remaining in it, and for the same reason is more than usually resistant to absorption. That the strands are sterile as well as antiseptic goes without saying.

A SIMPLE DEVICE FOR IRRIGATION OF THE BLADDER.

HUGO EHRENFEST, M.D.

Assistant Professor of Obstetrics, St. Louis University.

ST. LOUIS, MO.

The inadequacy of a piston syringe for irrigation of the bladder is a generally appreciated fact. A few of the numerous models of bladder syringes will stand boiling, but they are all rather expensive and easily get out of order. So long as the piston fits tightly, the fluid unavoidably is injected in jerks and not in a continuous stream. In spite of these obvious disadvantages of the piston syringes they are recommended by the majority of text-book writers, because they permit an exact estimation of the amount of fluid injected into the bladder—a point of considerable practical importance. In actual practice, the piston syringe is frequently supplanted by the glass irrigator or the rubber fountain syringe. The glass irrigator, while it permits an exact mensuration of the injected fluid, is not easily sterilized. The fountain syringe can be boiled, but precludes the determination of the amount of fluid which passes into the bladder. For this reason the rubber fountain syringe may prove a dangerous instrument in the hands of the inexperienced. The Pollitzer bag, which is used by some physicians, seems preferable; it can be boiled, at least a few times, and allows a rough estimation of the quantity of fluid injected.

It must be admitted, therefore, that an improvement of our present appliances for bladder irrigation seems desirable.

I present here the description of a simple apparatus, which I constructed some time ago, and which in my hands has proved extremely satisfactory. The principle of the device can be briefly outlined as follows: By means of air pressure fluid is forced out of a bottle, exactly as in Fowler's bottle used for hypodermoclysis. The fluid is conveyed through a rubber tube to the bladder. By the interpolation of a three-way stop-cock the solution can be alternately injected into and removed from the bladder by a corresponding turning of the handle of the stop-cock.

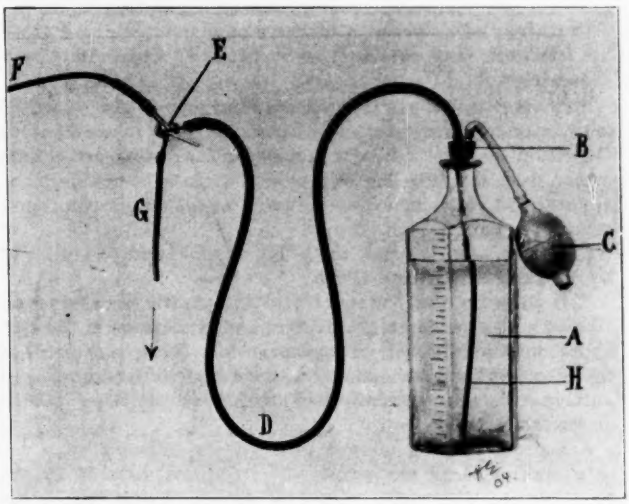
DETAILS OF CONSTRUCTION.

In the accompanying illustration the bottle A is a common one-quart medicine bottle such as can be bought in almost any drug store. These bottles, as a rule, carry a double graduation, on one side in ounces, on the other in cubic centimeters. The bottle is closed with the rubber stopper B. This stopper is perforated by tw bores into which are screwed pointed metal tips for the attachment of rubber tubes. To the one tip is connected the air bulb C. The other bore connects on its under end with a rubber tube H reaching to the bottom of the bottle. The rubber tube D connects the bottle with the stop-cock E. This is a three-way metal cock which, I believe, can be bought in any instrument store. To this is attached a No. 10 or 11 Nélaton catheter F. The handling of the stop-cock is facilitated by a shortening of the catheter. Especially in gynecologic work, a catheter of about 7 inches is long enough. To the third tip of the stop-cock is joined a rubber tube G, which leads to the waste jar.

METHOD OF USE.

The apparatus is used in the following manner: The air bulb is detached and the rest boiled; it seems unnecessary to sterilize the bottle every time it is used. Of course, this bottle contains only sterile, as a rule antiseptic, solution. The bottle can be kept sterile and ready for use, if immediately after its use the rubber stopper, together with all the rubber tubing atached to it, is removed, and the bottle closed with another rubber stopper which has been boiled with the tubing.

Into the bottle is poured the fluid to be employed for irrigation. This solution can be kept in stock in a higher concentration, and with the help of the graduation of the bottle may be diluted to the desired concentration by the addition of sterile water. The stopper B is fitted tightly and the air bulb C attached to the corresponding tip. The stop-cock is turned so that it connects tube D with catheter F. Air is pumped into the bottle until the fluid escapes from the eye of the catheter. In this way the whole system is freed of air. If the apparatus is used preceding a cystoscopic examination, the stop-cock is set to connect tube D with G. The air is thus removed only from tube D, while the air within the catheter is permitted to pass into the bladder, where it forms the bubble which, during the cystoscopic examination, marks the vertex of the bladder.



The stop-cock is set into a middle position, which shuts off all three ways, while the catheter is introduced into the bladder. By turning the handle of the stop-cock with the thumb of that hand which holds the catheter between the first and second finger, the catheter is placed into communication with the waste tube G and the urine drawn from the bladder. The handle is then turned 90 degrees upward and tube D will be connected with the catheter. The other hand (usually the right one), now grasps the air bulb and slowly pumps air into the bottle. The escape of the fluid, both its celerity and quantity, are exactly observed on the graduation of the bottle. It may be mentioned in this connection that in this manner the capacity of the bladder can be ascertained in a most convenient way. If enough fluid is injected into the bladder the stop-cock is turned another 90 degrees with the thumb of the left hand, and the solution escapes from the bladder into the waste jar. This procedure can be repeated *ad libitum*.

I have given the description of the construction and technic of this little device for irrigation of the bladder in this detailed form, in order to prove that this apparatus can be reliably sterilized, is not likely to get out of order, permits the aspetic irrigation of the bladder under exact control of the flow, and can be used without the help of an assistant, practically without any preparations. It is obvious that the apparatus is cheap and can be put together by every physician. In an up-to-date office building, in which every room is supplied with compressed air, an appropriate hose attachment such as that commonly used by laryngologists for sprays can be connected directly with the bottle.

Of late, convincing proof has been furnished that the cystitis subsequent to catheterization can most effectively be prevented (as first demonstrated by Baisch) if the bladder is irrigated with an antiseptic solution after every catheterization. The appliance described here is extremely suitable for such a routine combination of catheterization with bladder irrigation.

PYONEPHROSIS.

REPORT OF A CASE IN A NURSING CHILD OF SIX MONTHS. OPERATION, RECOVERY.*

CHARLES P. STACKHOUSE, M. D.
WILKESBARRE, PA.

History.—Charles S. was born Sept. 8, 1904, was entirely breast-fed and was a typical healthy babe. As far as can be ascertained, no solid food had entered his stomach until the morning of the attack, when he was given a small piece of cracker. The bowels were regular and there was free excretion of apparently healthy urine.

On Monday morning, March 6, 1905, about 10 o'clock, he began to cry loudly, as if in intense pain. A laxative and some colic cure were at once administered, and after a couple of hours he was cooing as if nothing unusual had occurred. In the afternoon he was somewhat restless, and all night he was feverish. A laxative and a dose of niter were administered and a moderate response was obtained, with little or no diminution of restlessness.

Examination.—I saw him on the afternoon of the second day and found him very restless. His hands were in constant motion from the wrist, there was a continual closing and opening of the fists, some tossing of the head from side to side, and a slight grunt accompanied each expiration—all indicating severe pain.

The lungs were normal, the pulse was 130 and of good quality, and the temperature 102.6.

The abdomen was distended and tympanitic above the umbilicus, with considerable resistance and tenderness in the right hypochondriac and lumbar regions, while below the umbilicus there was little or no distention, resistance or tenderness, permitting careful examination of the lower abdomen without discomfort.

An enema of olive oil was immediately followed by a very free, normal bowel movement, and fractional doses of calomel given during the night gave free action of the bowels and kidneys, which resulted in a marked improvement in all his symptoms, although the temperature was still 101.4 and pulse 130.

On the fourth day his temperature and pulse became normal and apparently he had returned to his usual healthy condition.

Second Attack.—One week from the onset of this attack occurred a second, which differed somewhat from the first. After a few hours of restlessness and evident distress he began to retract the head and body, roll the eyes back, and appeared to be going into convulsions. There was the same pinched, anxious expression on the face, and each expiration was accompanied by a pathetic moaning cry. Examination found no trouble in the lungs; pulse was 130 and of good volume and temperature 103. There was now no distension or tenderness in the right hypochondriac region as in the firs attack, while in the right iliac region the muscles were rigid and exquisitely tender, the slightest touch eliciting cries of pain. The same peculiar action of the wrists and hands was present at this time and continued until the operation.

After a very restless night the disturbance in the appendiceal region seemed accentuated, and there was added to the symptoms already described flexion of both thighs on the abdomen. At this time it was first noticed that he would cry just before micturating and that the urine had a strong odor and left a dark stain.

Wednesday, the third day of the second attack, he was decidedly weaker and the temperature was higher, while the pulse still remained 130 and of good volume. The facial expression was one of general misery. He had passed a very restless night, apparently in constant pain. Believing pus to be present, I asked for a consultation and Dr. Wolfe saw him with me, but as no mass was outlined it was decided to tarry a day or two, seeking, if possible, to avoid subjecting the little fellow to so dangerous an operation.

On Thursday he was restless and weaker, the temperature was higher, going to 104.2 toward night. There was extreme pain in the hypogastric and lumbar regions.

On Friday his condition was one of extreme prostration; the abdomen was distended and tender, the face was anxious and pinched, both legs were flexed, temperature was 103.4 and pulse 150. Dr. Wolfe was again summoned and the patient was examined under chloroform, when it was thought a small mass could be felt in the right iliac region.

Operation.—The condition was considered so urgent that operation was performed the same afternoon at the Mercy Hospital, Dr. Wolfe assisting. Through a small incision over McBurney's point, an abnormally long appendix was delivered and removed, but presented only slight thickening and congestion of the mucous membrane near the base and for the last inch of the distal extremity. Feeling positive that the severe symptoms could not have been produced by an appendix so little damaged, careful examination was made and a mass found posterior to the colon, lying on the lumbar vertebræ and extending below the crest of the ileum, which proved to be the greatly distended right kidney. The incision was extended upward, a small cross incision made on the lumbar side, and the kidney, which was freely movable, was delivered out of the abdomen. It was almost the size of the acute parenchymatous kidney of an adult, irregular, almost lobulated in shape, of bluish red color and fluctuated on pressure. On puncture nearly a teacupful of thin, brownish-yellow, offensive pus was obtained.

The parenchyma was about three-fourths of an inch thick and of a dark red, congested appearance. The fluid appeared to be chiefly in the pelvis of the kidney, but extended by at least two openings, into the kidney substance. The ureter was followed with the finger to the bladder and no obstruction was discovered, but as there was no sterile instrument small enough to pass from the kidney through the ureter into the bladder, and the condition of the patient did not justify waiting for one to be prepared, the kidney was anchored to the abdominal wall and the abdomen closed, leaving free drainage into the pelvis of the kidney.

Postoperative History.—For a week following the operation the condition was precarious. There was very free drainage of urine from the wound, but we had no evidence that the ureter was patulous. On the fourth day an aqueous solution of methylene blue was injected into the pelvis of the kidney, but no trace of it was found on the diaper.

One week after the operation, March 24, the patient was anesthetized and two filiform bougies were passed through the kidney and ureter into the bladder, when there was an immediate gush of urinous fluid from the wound. The ureter was apparently occluded for at least an inch. The bougies were left in place for two days, during which time no urine was voided naturally, but both kidneys were drained through the wound. After the filiforms were removed, both kidneys were drained through the bladder and the urinous discharge gradually disappeared from the wound. There was still a slight amount of pus on the dressings and occasionally there would be some urinous discharge, but by April 10 the wound had almost entirely closed.

On April 13 the temperature and pulse increased and there seemed to be swelling and distress over the kidney, indicating a blocking up of something. On inserting a probe considerable pus oozed out and he had immediate relief, with prompt closing of the wound.

From April 20 to 25 the kidney was apparently drained entirely through the wound. On April 25 he voided from the bladder, with very highly-colored urine, about an ounce of thick, creamy or caseous material, resembling thick pap, after which he voided urine normally and the wound closed at once.

The wound opened again on May 7 and drained the kidney

* Read before the Luzerne County (Pa.) Medical Society.

until May 11, when he again passed the caseous material, followed by immediate closing of the wound, which has not been open since—now over six months ago.

It was interesting to watch the return of the kidney to its normal condition. The microscopic appearance of the urine was especially interesting, as it showed the gradual opening up of the individual tubules by the presence of hyaline casts, of red blood casts and of hyaline casts stained blue by the methylene blue used in testing patulency of the ureter. These, apparently, were casts of the entire tubule, some of them extending entirely across the field of the two-thirds-inch lens. These were observed as late as six months after the operation. At present the urine contains a trace of albumin, some pus cells and a few hyaline casts.

REMARKS.

As to the etiology of this condition I have reached no conclusions. It may have been the result of a congenital hydronephrosis; it may have resulted from torsion of the ureter from floating kidney; there may have been occlusion of the ureter from uric-acid infarct, or there may have been an acute pyelitis,[1] followed by occlusion of the ureter from the resulting detritus. The child has a slight phimosis, but I hardly think that could have caused the difficulty, except that it might have been a possible cause of the pyelitis.

The treatment following the operation was largely symptomatic. For the first week he was given enemeta of salt water with stimulants. Hexamethylenamin (urotropin), potassium acetate and Basham's mixture were tried, but neither of them was as satisfactory as potassium citrate.

210 Parrish Street.

A NEEDLE HOLDER, WHICH CARRIES A CONSTANTLY THREADED NEEDLE.

SELDEN I. RAINFORTH, A.M., M.D.

NEW YORK.

The necessity of repeatedly threading the needles that are commonly used and of inserting them in holders, when many sutures have to be placed, led me to devise an instrument which I have used for over a year with great satisfaction. The needle is set at right angles to the shank of the holder, is fastened in its socket by a small thumbscrew, and need be released only when the operator desires to replace it by another needle of different size or shape. The eye is near the point of the needle. Suture material, silk or catgut, is sterilized on a bobbin made to fit into the handle of the instrument and the thread unwinds as it is used. From the bobbin the suture passes through the hollow shank of the holder to an opening near its distal end, then across to and through the eye of the needle.

Fig. 1.—A needle holder which carries a constantly threaded needle.

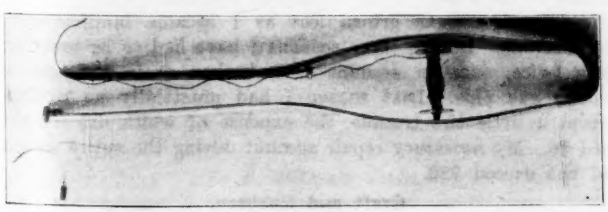


Fig. 2.—Needle holder opened for threading.

Sutures are placed just as ligatures are passed with an aneurism needle. The two edges of a wound are pierced successively by the needle, the end of the suture is then grasped and the needle withdrawn. If the thread is now cut near the needle a single interrupted suture has been placed, and the needle, still threaded, is ready for the insertion of another suture. Similarly, any form of interrupted suture, plain, Czerny's or Lembert's, can be very rapidly put in, and even a Halsted's quilt suture, by introducing the needle a second time through the lips of the wound before the thread is cut. A continuous suture, except a continuous quilted suture, can not be made, of course, with a fixed needle.

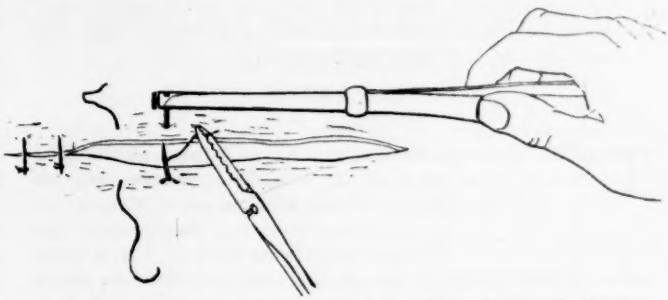


Fig. 3.—Needle passed through two edges of wound, forceps grasping the end of the suture to hold it while the needle is withdrawn.

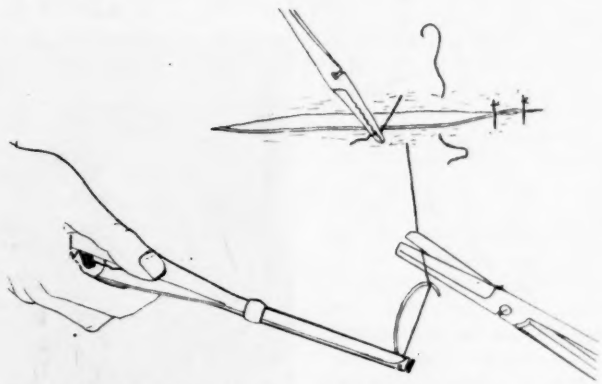


Fig. 4.—Needle withdrawn, still threaded, leaving suture in place ready to be cut off at the desired length.

An important point is the simplicity of construction of the needle holder and the ease with which it may be cleaned.

In laparotomy the proper closing of the abdominal wound in layers is tedious, but by the employment of this instrument the time required for that part of the operation is shortened at least one-half. The value of the needle holder as a time saver in perineorrhaphy, radical cure for hernia, and all operations of a similar character, needs no comment.

Broadway and Sixty-first Street.

1. Marcel Hartwig: Berliner Klin. Woch., Nov. 30, 1903.

The Record of the Schoolchild.—When school opened last fall at Nice, France, a small blank book was given to each child, in which was recorded his name, age, residence, birthplace, date of vaccination, weight, height, chest measure, aptitude for games, and other particulars. Brief notes on hygiene are also contained in the little book. A corresponding card is made out for each pupil, which is kept by the medical inspector of the school on the card catalogue system. The book and card are to be brought down to date each year, and the physician can thus have an oversight of the growth and development of all the children in the school. The parents also can see from the booklet the physical progress their children are making. Morbid tendencies will be detected early, allowing a chance for correction. This combined system of cards and booklets was originated by Dr. C. Roux of Nice, and has been formally adopted by the municipal authorities.

AUTOMOBILES FOR PHYSICIANS' USE

ARE THEY PRACTICAL? ARE THEY DESIRABLE? ARE THEY ECONOMICAL? ARE THEY BETTER THAN HORSES?

THE AUTOMOBILE A GREAT ADVANTAGE TO ANY PHYSICIAN.

JOSEPH B. EARLE, M.D.
GREENVILLE, S. C.

THERE is no question about the usefulness of an automobile to a physician. It is so much quicker and can be left standing anywhere without an attendant. It can easily cover twice the ground in a day that a horse can, and in the summer, when the warm weather is hard on a horse, the auto is a great advantage, as both machine and driver are cooler when going fast.

Twice the Work of the Horse for the Same Cost.

The cost of running just about equals that of a horse and buggy ($12 to $15 a month)—and this is in favor of the machine, when everything is taken into consideration, as it will cover twice the ground and save much valuable time.

Every physician should equip his car with a good acetylene headlight for night driving. He should also have a pair of chain tire grips for muddy roads. During winter some of the roads here are at times impassable for a few days. Still, there are very few days during the winter that I can not go almost anywhere. I can always go within the city limits.

Fig. 1.—What one country practitioner calls the best investment he ever made.

I have been using an automobile in my practice for about two years. I operate it myself and look after everything necessary to keep it in order unless I have an accident or want it overhauled — which I have done in the spring. I am using a single cylinder, 5x6, seven-horsepower runabout (103*), hung on side springs, and have a top and curtains and storm apron to protect from the rain. It cost $650 with $25 additional for rubber top.

My little car has surely done noble work, and it would be very difficult for me to keep up without it.

THE AUTO AS A PHYSICIAN'S VEHICLE.

F. M. CRAIN, M.D.
REDFIELD, S. DAK.

DISCARDING the old reliable horse for the automobile requires so much expenditure of money, and involves so much uncertainty of success that many physicians are deterred from making the change. The experience of those physicians who have been pioneers in the use of the motor car, in their practice, scattered as they are throughout every state in the Union, ought to be a fairly reliable test as to the merits of the automobile as a physician's vehicle.

The testimony of those who have tried the automobile will undoubtedly differ widely. I have no doubt the difference is not in the machine, but in the men who run them. Some men are incapable of running machines of any kind, while others possess mechanical ability, either natural or acquired. To the latter class the automobile will prove reasonably satisfactory after they have studied the mechanism of their car and learned from actual experience those valuable lessons that come only from practical use and which may be learned at considerable cost and annoyance.

The Carburetor the Heart of a Gasoline Machine.

The trained ear of a physician, which quickly detects the least departure from normal heart sounds, serves him well as an automobilist. The normal sounds and pulsations of a gasoline engine are as characteristic as normal heart sounds, and when the regularity of these sounds become intermittent in character he quickly diagnoses the trouble.

An automobile is capable of doing the work of three good driving teams, and the driver can accomplish three times the amount of work, with more ease and comfort, than with horses. The auto enables the physician to spend more time in his office, that can be profitably employed in studying or recreation, the value of which can not be computed in dollars and cents. While it is a pleasure to drive a good team, their endurance is soon taxed to the limit under the pressure of long drives. Not so with the automobile. It is true that it has a limit of endurance, but so long as it is in working order and properly cared for, it is eady to do your bidding.

I have made over a hundred miles in eight hours, including eight professional calls, and the machine was capable of duplicating the trip without any extra work except replenishing the gas and oil. A machine that is capable of running continually for an indefinite period certainly commends itself to the busy physician. In country practice, where physicians are often times compelled to make from 50 to 100 miles a day, the horse can never compete with an automobile in the hands of an intelligent operator.

My troubles have grown less as I became familiar with my machine. During three seasons I have had to be towed in only twice, once on account of a broken chain and once a broken gas pipe. Last season I had practically no trouble, except a little tire trouble, the expense of which did not exceed $6. My necessary repair account during the entire season did not exceed $20.

Graft and Robbery.

There are combinations, however, that are operating not only to keep up the price of the automobile, but to make it expensive to procure repairs. Take for instance the cost of tires. It cost me over $200 to change my car from 3x28 to 3½x30 tire. This cost, without a doubt, represents a big graft, made possible by the rubber trust that controls every department of the rubber industry. Even the railroad companies seem to think the automobilist is a legitimate subject

* Reference numbers are explained editorially.

for plunder, and proceed to work their graft, charging double first-class rates on automobile parts.

The Features of an Ideal Car.

An ideal physician's car has not yet been placed on the market. The nearest approach to it, in my opinion, is the car that combines: 1, Simplicity of construction; 2, accessibility to all the vital parts; 3, the minimum cost of operating; 4, superior material and workmanship in its construction; 5, the least amount of labor required to operate. To be more explicit, a 10-horsepower, single cylinder, gas engine runabout, water cooled, chain drive, two speed ahead, one reverse, geared to a speed not to exceed 25 miles an hour, equipped with a standard double-tube tire not less than 3½x30. After operating a single cylinder, 10-horsepower, for three years, and comparing my experience with those who have driven multiple cylinder cars, my opinion as to the superior merits of a single cylinder has become thoroughly fixed. A 10-horsepower single cylinder develops sufficient power for a tonneau attachment, whereby a physician's runabout may become a family vehicle.

I care for and operate my car (128). I usually spend half an hour before breakfast getting it ready for the day's work. I enjoy caring for and keeping it in order, but the height of enjoyment is reached when I operate the throttle on a good stretch of road. I frequently take my family on long country drives and they all enjoy the exhilerating influence of an automobile ride. My son, 12 years old, operates my machine with the confidence of an expert operator.

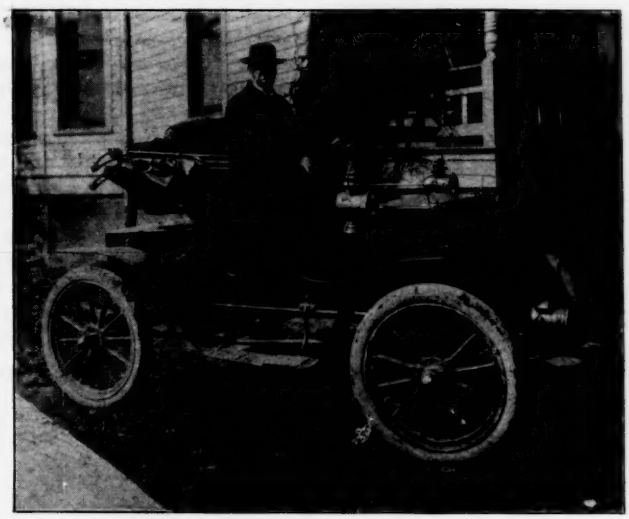


Fig. 2.—The car of a southern physician who lives in a region of very bad roads.

Permit me to relate the following to illustrate the confidence I place in my machine: Late one Saturday night I got a call to a town 38 miles distant. The entire trip would have to be made after 10 o'clock, and as the night was dark and the roads bad, I concluded to take the night train. I could not return before Monday morning. I told my daughter (17 years old) that she could drive out for me Sunday morning. About 10 a. m. she drove into town accompanied by another young lady. They were unacquainted with the roads and went 6 miles out of their way, making the 44 miles in three hours. I was at home at 3 p. m., ready for more long drives.

The greatest problem in automobiling is the tire question. The cost of keeping the car equipped with serviceable tires is far in excess of all other expenses.

One of the beneficial results of the use of the automobile as a means of travel is the effect it will have on the good road movement, thereby benefiting the general public as well as the automobilist.

DETAILS FROM EXPERIENCE.

C. H. BRYAN, M.D.
CHICAGO.

THE practicability of the automobile for business purposes is, I think, well established. In my five years' experience with several types of gasoline automobiles I have come to the following general conclusions:

1. The simpler the machine and the less parts, the less is the possibility of trouble.
2. The lighter the weight, the longer will be the life of all parts.
3. To be in the range of practicability at all, it must not have pneumatic tires.
4. It must be air cooled.
5. For city use it must be able to run in street-car tracks without damage to tires.
6. It should be high enough from the ground to prevent the vacuum from sucking up dust into the machinery and car and to clear obstacles, such as large stones and high centered roads.
7. It should have at least two cylinders.

A car possessing the above qualities and in the hands of a man who is willing to learn a few things about how to adjust it, is a great saver of money, time and physical energy.

Trouble Galore.

About five years ago I purchased a second-hand runabout with the idea that I could have it overhauled and made into a practical doctor's vehicle. After spending about $900 I found that I could not make it practical. Every change I made in any part would necessitate a change of other parts, from motor to tire. I soon abandoned this idea and purchased a cheap runabout, water cooled, pneumatic tired, with single cylinder and planetary transmission. It was fine for one day, then I hit a spike and put a tire out, then in rapid succession came pump trouble, leak in radiator, leak in gasoline pipe, broken spring, flooding carburetor, bent axle, broken balls, cutout cones, broken connecting rod, short-circuited coil, broken commutator and other troubles.

My average was about three professional calls to one to repair shop or tire store, with big bills in proportion, and a horse in the stable to pay for besides.

A large part of my trouble, as I know now, was due to cheap material and construction and to the fact that properly designed parts were not to be had at that time. In about five months this machine was down and out.

Trouble with Water Cooling.

My next experience was with a larger and heavier single cylinder car, with a detachable tonneau. It was rated at about 8 horsepower, water cooled clincher pneumatic tires, and altogether was a very respectable looking car. I had success with this for two months, after that I went over the same old route, except that my repair bills were larger. In winter I used all recommended drugs in the water to prevent freezing, with poor success, and when winter was over calcium chlorid had eaten up my water tank and radiator, all assurances from dealers notwithstanding. I think a galvanic circuit was formed between the different metals used in the construction of the water circulation. The principal trouble with this car was with pneumatic tires. After running the car a year and spending about $250 for tires, I devised a resilient solid rubber tire (106). After this I had very little trouble, and sold the car, after having used it two years, to try a new kind which looked more economical and practical. The old car, however, after three and one-half years, is still running in the hands of its new owner and the tires are still good.

Success at Last.

About a year and half ago I got my fourth machine (105), a high-wheeled affair, looking like a buggy. It had a double

equipped with roller bearings in every place possible to reduce wear. This buggy automobile I have found to be the most practical of all, for business or pleasure. It has very few parts to get out of order; no water to freeze, no puncturable tires, rollers in the wheels, consequently no axles to grease. The engine is well made and reliable. The air cooling actually cools. It will run in street-car tracks without injury to the tires; it is noiseless and speedy. On long country runs it does not raise dust or give any other trouble. Some object to it on account of its looks, but I find it so practicable as to remove this objection.

I find that with a good practical machine a physician can make better time and do more business with less physical effort than by the horse route. If a horse goes lame it may be weeks before the trouble can be fixed. If the machine breaks it can be replaced much quicker and easier. A machine will not suffer out doors in cold and stormy weather. It will not wander away and can be cared for by oneself much easier than a horse.

This machine is cheaper than a horse in the city and much more satisfactory in every way.

I now use my auto for all my work and pleasure and do not find it necessary to keep a horse or to take the street car.

THE AUTO TOO MUCH TROUBLE TO KEEP IN ORDER.

F. A. SWEZEY, M.D.
WAKONDA, S. DAK.

IN my practice, which is entirely country work, I have used, for two seasons, an 8-H.P., one cylinder, water-cooled, gasoline runabout (III), and I find that the automobile is not practical for such work, owing to bad roads and inclement weather. They are more for pleasure than for general business use, and I would not advise any physician in country work to buy one and to rely entirely on it. In night work or in wet or cold weather an auto is very annoying; in fact, I have sold mine, and will never buy another. As my friend, Dr. Jepson, of Sioux City, expressed it, in reply to my question as to whether or not he was using his much, "I am not, as I do not get time to run it." The worst drawback is keeping them "tinkered" up every day before using, with the dirt and grease that goes with it. The expense for repairs is very little, but the time put on it is valuable.

IT ALL DEPENDS.

H. A. RODEBAUGH, M.D.
COLUMBUS, OHIO.

THE automobile consists of many working parts and, like all other delicate machinery, requires frequent, intelligent inspection, and prompt correction of little wrongs in order to secure efficient and economical service.

The physician who keeps his horse and buggy in the pink of condition by looking after the food, drink, shoeing, etc., of the former, the oiling, tightening of nuts and other little repairs of the latter, and whose office equipment, batteries, instruments and all other appliances are always ready for instant use, will have no difficulty in operating an automobile as economically as he would maintain horse-drawn vehicles for the same service ($20 to $30 a month).

The Careless Physician Will Have Trouble.

On the other hand, the doctor whose horse is always lame or sick, whose buggy rattles and looks rusty, whose office batteries are always out of order, whose instruments are strewn about, sandwiched between books and bottles, one, in short, whose office resembles a jungled-up junk shop, will be sadly disappointed in his effort to use an automobile unless he is willing to employ a chauffeur.

To use an automobile successfully the physician requires a first-class machine. The cheaply constructed auto of any kind can not be operated economically nor efficiently.

For the physician's use, an automobile should be light, strong, speedy and easily operated. To conform to these requirements it is necessary to have an air-cooled cylinder to diminish weight and to eliminate plumbing troubles. My machine is representative of this type, and it is extensively used by physicians (101).

One Way to Swell Expense Account.

Next in importance is a thorough knowledge of the mechanism of operation. A physician who was condemning automobiles because of the cost of fuel was found, on investigation, to be running his machine with the throttle wide open, regulating the speed by the ignition lever, thus entailing enormous loss. He was astounded at the result when this error was corrected. It is estimated that 90 per cent. of the motorist's difficulties are due to ignition troubles.

In the case of physicians who are supposed to be familiar with electricity and batteries, these annoyances should be reduced to a minimum.

AN OUTLINE OF THE IDEAL CAR.

C. P. THOMAS, M.D.
SPOKANE, WASH.

I BEGAN using automobiles exclusively four years ago, giving up two horses. I have spent a considerable amount of money in trying and discarding rigs, having owned seven (196).

I am unequivocally in favor of the automobile for the physician in any country where one can be used. It would pay the majority of busy country practitioners to have autos for use at the time of the year when roads are passable, discarding horses except when the mud is so deep that it is impossible to travel in an auto. My auto costs me about $24 a month. To keep two horses cost me $36 a month.

It is necessary, however, to buy the right kind of a car. I would exclude altogether any other motor power than the gasoline engine with electric explosion. Steam and electric cars are very heavy, bunglesome, more dangerous, shorter lived and less satisfactory in many respects.

Four Cylinders Best.

I would advise wheel steer and multiple cylinders (in front and not under the car where they are inaccessible). Four is the best number, since they may be small, causing less car vibration during explosion, and the pull is steadier, thus greatly lengthening the life of the rig. Another marked advantage in multiple cylinders is that if one goes out of commission for a few minutes the others will take it along comfortably until the dead one comes in again. I believe upright cylinders to be more satisfactory, the wear of the rings is more even and the machinery less complicated. Chain drive with planetary transmission is satisfactory if well protected from dirt. The shaft drive, if well made is all right, and permits three speeds forward, which is of marked advantage, allowing hills of considerable grade to be taken with ease in the intermediate speed.

Advises Air-Cooled Engines.

Air-cooled engines are far superior to water-cooled ones, because they cost less to build, permit great reduction of weight (involving less fuel and tire expense), save much expense for repairing of plumbing (the water radiating system being delicate and easily deranged), and do not freeze up in cold weather. I know from two and one-half years' personal experience that the air-cooled engines are sufficiently cool for good service. Large cars should have fans attached to increase the circulation of air.

The physician should buy an automobile with at least two horsepower (actual, not estimated) more than there are hundreds of pounds weight of the rig. For comfort in riding over rough roads, speed and durability, the car should not much exceed 1,000 pounds weight, having preferably 12 horsepower. There should be seats for two and only two.

Two Weeks' Course of Instruction.

The next most important factor is that the driver must know his car. It is unsafe for any man unfamiliar with gasoline engineering to attempt long trips until he has spent at least two weeks with a good skilled demonstrator, who has shown him why and where everything works. Many little matters can be adjusted in a minute if understood, but they can lay one up for a day if one does not know how to find them. This lack of knowledge on the part of operators has tended to make the use of automobiles less popular.

Any busy practitioner in city or country can do three times as much work, if he has it to do, with a good auto than with the best team. It is more comfortable, more cleanly, more pleasant and less nerve wracking and not more expensive than the use of horses.

Autos Used Every Day in the Year.

In this climate in the city, even off the pavements, I operate my wagons (197) every day in the year, having them washed and oiled daily at the garage. I also have all adjustments done there, but most of them I could do if I cared to take the time. The weather is never too wet, or too cold or too hot or too dry to leave the auto out in front of your office, hospital or patient's residence while you attend to your business, unconcerned about the welfare of some poor beast of burden.

It must be remembered that a wagon filling the above description (which should, by the way, have a canopy top with glass front for the winter use, the glass being removed if preferred during the summer) can not be purchased in the market for much less than $1,500. While there are a number of small single cylinder rigs for sale cheaper, some of which give very good service on good roads and in good weather, I do not believe it wise to purchase them, the cheaper rig being more expensive in the long run.

A HIGHLY COMMENDATORY STATEMENT.

A. N. COLLINS, M.D.
DETROIT.

MY experience has been with two small one-cylinder cars, weighing 750 and 1,150 pounds. I have used them constantly for over four years in my practice, which is largely limited to the city of Detroit. I have cared for my machine nearly all the time. The first year I ran my light runabout one year at an expense of $20 per month. The machine enabled me to do much more work, to have more leisure than with two single rigs, to dispense with the coachman and to have much pleasure and satisfaction. The drawbacks were an occasional let down at an inopportune moment, greasy clothes and, at times, disappointed patients.

Auto Far Cheaper Than Horses.

Covering a period of twelve years, my expenses for two single horses and rigs with man, board, etc., figured $113 per month, $1,350 per year. I paid for my machine (107), paid all its expenses and was $175 under the cost of horses the first year. Owing to the tire and other delays, I decided that two machines would be the only solution of the difficulty. In March, 1904, I purchased a second runabout (108) which I now use. Largely owing to the uncertainty of tires, I was still annoyed by the uncertainty of getting to my patients. I nearly always had a machine in reserve, but that helped me little when a tire went down in the middle of my rounds.

Solid Tires Solved the Difficulty.

In May, 1904, I equipped my latest purchase with four-inch solid tires (109), on which I have run constantly with perfect comfort since, now nearly twenty-three months. After putting on solid tires, I found little or no use for a second machine. I sold my first purchase for $220 in June, 1905. Since that time have had as little inconvenience and delay with my machine as I would experience with horses. My monthly expense for twenty-three months has been under $18 per month for all expenses. I have entirely eliminated the tire expense and delay, having had not one cent's expense during this time. Aside from gasoline, oil, alcohol and batteries, the main expense has been one repainting and three overhaulings to put on new sprocket, gears and chains. I have worn out three sets of sprockets, gears and chains. The expense of these replacements has averaged about $50 each time for labor and new parts. I have had no breaks that are not common to the same machine equipped with pneumatic tires.

Twenty Thousand Miles on Solid Tires with Comfort and Economy.

A modern well-made machine should run at very small expense when one eliminates the tire expense, as can be done by using solid tires. I have demonstrated this beyond any question, the machine men and tire men to the contrary notwithstanding. Solid tires can be used with perfect comfort, and are a much better winter tire than pneumatics. My machine has made over 20,000 miles, and the tires look good for another year. The most helpful experience I can contribute is this feature of having demonstrated the practicability and comfort of using solid tires for daily work. To have a tire that never goes down or gives trouble or expense does away with 95 per cent. of the uncertainty of the auto.

No Trouble with Water-Cooling Device.

I can not speak for country work, but for city use there can be no question as to the economy and efficiency of the auto in our work. We need a strong, light machine, well wired, with strong axles and easy springs. I have for three seasons used for an antifreezing mixture, simply water with 25 per cent. wood alcohol. I have never had any trouble with it, never burst a radiator or broken a pump. At first I added glycerin. I found no benefit from it. One-half the usual quantity of cooling solution is ample in cold weather. Keep the solution well down in the tank. The proportion of alcohol should be kept up.

Auto Ranks Next to Fishing as Recreation.

My machine is kept in my basement, where I have my work bench and tools. If one is inclined at all to mechanics, the few minutes each day or the occasional hour or two spent at putting the machine in shape is a pleasant diversion and gives a perfect rest from the line of thought ever in our minds. I look on it as next to fishing for forgetting other work. A few moments before breakfast is sufficient to oil it, inspect it and put it in order for the next twenty-four-hour run. It seldom needs anything further. In this way you become a part of your machine and it becomes a part of you. I no sooner think of my machine not going than I do of my legs not going. My whole experience is wholly in favor of the auto as compared with horse power in our work.

THE DIFFICULTIES OF EXPERIMENTATION WITH AUTOS.

C. B. MILLER, M.D.
HELENA, MONT.

IN the spring of 1903 my son, while East brushing up on professional topics, became interested in the automobile, investigated a number, and finally ordered one, which was to be shipped in a month. A month's interest on the money did not look large to him, so he paid full price and the vehicle was shipped *four* months later. In the meantime, he concluded not to remain here, and, when the machine arrived, *my* experience began. The first evening I drove about 2 miles, up and down some pretty steep grades, and was well pleased. The next evening I went to see a patient 6 miles in the country (having my horse and buggy follow). I made the trip out in excellent time, but on the return a carburetor trouble developed (as was afterward discovered from a lump of solder lodging on top of float) and much gasoline leaked out.

When we got well into town the commutator loop had worn through and was giving a spark that would have done credit to the best *x*-ray machine. This set the gasoline on fire, and but for a lawn hose that was being used near by my subsequent trials might have been avoided. The manufacturers promptly sent me a new commutator and ignition cords, for which they charged full price. Being about as good mechanic as doctor, I repaired the old loop, making it much better than when new, wrapped the burned wires with adhesive plaster and soon had the thing going again. I tried two other carburetors before getting one that was a success and had several so-called experts working on the machine while I was daily acquiring experience—and possibly losing religion. I never started out with the certainty that I should not have to be hauled home, as frequently happened. I returned the motor to the factory in December, 1903, but it did not do any better, and in January, 1905, after an accident, the manufacturers said it would cost $40 or $50 to repair the motor, and I shipped it to them again. They returned it *in five months* with a bill of $75, but after an exchange of a few pleasantries, they generously threw off $10. By this time the expense had reached the sum of $223.40, not counting original cost or freight, and I had driven less than 200 miles, and kept my horse and buggy as before.

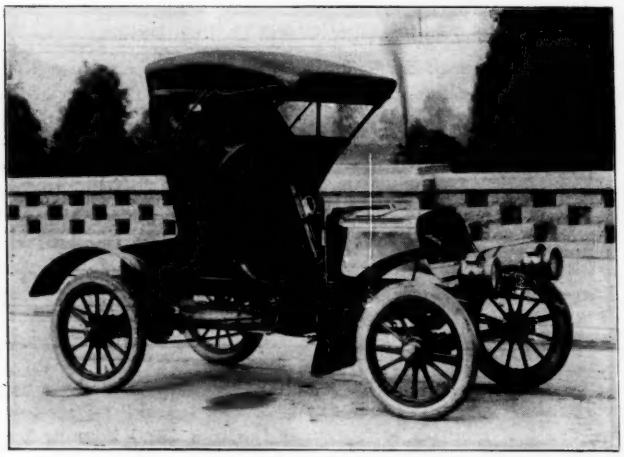


Fig. 3.—The car of an Indiana practitioner.

Runs Through a Montana Winter.

In reconstructing the motor the company greatly improved it, and since that time I have driven 405 miles, through snow, mud and on ice without the slightest fear of having to be hauled home. One trip was 14 miles in the country and back, through from two to eighteen inches of snow, considerable of the distance drifted and unbroken. I dispensed with a horse and have done all my work with the machine, out every day and frequently at night. We have had an unusual snowfall this year and two months of nearly continuous sleighing, and no other auto has been on the streets except occasionally on a fine day. We have no level streets, all have grades of from 2 to 25 per cent., and this makes the use of a machine more difficult than in most cities.

All Expense Less Than Five Dollars a Month.

My total expense since September 24 has been $25.25, which includes an improvement on the brake, change in connecting rod and cover over rear of body, in all, $8.25, $5 rent of ground, two sets of batteries, a few minor repairs and 25 gallons of gasoline, of which I have 5 gallons on hand. My horse cost $25 per month for board, besides shoeing and repairs to buggy and harness, and I would dislike very much to return to the use of one. I use a vehicle (110) with 44- and 48-inch wheels, solid rubber tires, stationary roller-bearing axles, double opposed cylinders, air-cooled, sliding-gear transmission, with two speeds forward and reverse, chain-driven counter shaft, rope drive to near rims of wheels, maximum speed of about 20 miles. I believe this is the best kind of a machine for a physician who does his own driving and care taking. It is easily controlled, clears the ground 18 inches (a great advantage on country roads), runs as fast as the laws of most states permit, is not high priced, and under ordinary circumstances is not expensive to maintain. Being air cooled, it can be used in the coldest weather, may be left standing out all night—as mine has frequently—without fear or sympathy for the horse, and does not cost anything when not in use. For use in daily practice of medicine, I would not exchange mine for any of the numerous cars in the city costing from $650 to $3,500.

Enjoys Repairing in Leisure Moments.

As to housing, I leased a part of a vacant lot near my office and had a corrugated iron building 10x12 constructed. It contains a bench, vise and necessary tools for ordinary repairs, and I can do most of them in my leisure moments and enjoy the diversion. I have washed out crank case once and cleaned spark plugs twice in five months, and it requires little time to fill gasoline tank and oil cup occasionally. I can run the machine out and make an ordinary call in the time I waited for my horse.

Simple things often cause great annoyance, none more frequently than electrical disconnections. I have known autoists to have to be hauled home, and it once happened to me, on account of a broken or loose battery connection. While a volt-ammeter is valuable in ascertaining condition of battery cells, a much more useful article is an ordinary buzzer, such as is used as a substitute for an electric bell. By attaching two short cords which can be applied to the elements, any break in the circuit can be readily ascertained. The strength of the battery or of different cells can also be sufficiently determined. It is inexpensive and worth its weight in silver, at least, to the automobilist, and one should always accompany the machine.

If I desired a machine for pleasure or touring I should want one with three to six cylinders, 30 to 40 horsepower, air cooled and shaft drive, but such are too expensive for ordinary practice.

Manufacturers Do Not Deal Fairly.

The trouble is that many manufacturers, after getting your money, do not seem to care at all whether the machine meets your expectations or not. If living at a distance you pay for it without knowing whether it is properly assembled or will turn a wheel, and the guarantee is practically valueless. No one should buy an automobile of any kind or make without expecting "a heap of trouble on the old man's mind."

AN EXPERIENCE OF FOUR YEARS WITH ONE CAR.

IRA M. COMSTOCK, M.D.
NEW YORK MILLS, N. Y.

AFTER four years' experience with the same motor vehicle (125), getting better service each year from it, and a twenty-five years' experience with horses, I prefer the automobile for my use. The vehicle that can shorten distance from one-third to one-half is pre-eminently the doctor's best transportation.

The requirements in a motor vehicle for a physician's use are light weight, high power, simple mechanism, large wheels, long springs, few bearings, and equipped with both batteries and magneto, as a little mud, water or oil will queer the magneto at times, and if you have a set of live batteries, switch them on and go on without loss of time. My machine has 10-horsepower, triple-cylinder motor and weighs 950 pounds.

Sent His Man to Factory to Learn Care of Auto.

My machine is kept in the barn with my carriages, and is cared for by my man of all work, whom I sent to the factory for two weeks to familiarize him with the construction of the vehicle from the ground up, to learn how to keep the machine in the most serviceable condition, to make ordinary

repairs and adjustments; in fact, to see that it is always ready for use.

The cost of the motor carriage was $1,250 at the factory. The total expense of maintenance for four years, including freight and express charges on machine and parts, accessories, repairs, new rims and tires, gasoline, cylinder and lubricating oils, batteries, magneto, insurance, registration fee, tags and number, expense of sending man to the factory for two weeks' instruction, the expense of an expert from the factory to start and give me instructions, in fact, every expense caused by the ownership of the machine, $749.28, a yearly average of $187.32, which is very close to the cost of maintaining my horse and carriage for the same time, and the auto has done the work of two horses.

Cheerful Audiences at Roadside Repairs.

The tires have been the most troublesome part of the machine. The disadvantages are the frightening of some horses and their timid drivers, the occasional necessity of making roadside repairs in the presence of an audience of guying smart Alecks, dodging missiles thrown by hoodlums and the discovery that there are some "road hogs" who are not automobilists.

THE PHYSICIAN'S AUTOMOBILE INDISPENSABLE.

HENRY ENOS TULEY, M.D.
LOUISVILLE, KY.

THE question must be approached from several standpoints: cost, maintenance, repairs, and finally comparison with horse and buggy. For ordinary city use the air-cooled machine probably has some advantages, as no trouble is had with antifreezing solutions made necessary in winter in the water-cooled cars. In my judgment the water-cooled car has many advantages in long-distance driving and touring.

Tires the Chief Source of Trouble.

Eliminating tire troubles, which on city streets will continue to be the principal and greatest source of trouble, the automobile is the decidedly best method of transportation for the busy doctor. I have been driving a single cylinder, water cooled, 1905, machine (102) for a year, at a cost in repairs and maintenance decidedly less than for the keeping of one horse. My machine is oiled and washed in my own stable, and a garage is not visited except for the repair of punctured tires (I find it decidedly more convenient and less troublesome to have this repair made by men of experience than to attempt it myself). For those who have the time and inclination a great deal of troublesome tire difficulties would be obviated by the use of the quick detachable tire devices put on the market during the past year.

The runabouts, or the small, four-seated touring cars, such as mine, are the only practical machines for the every-day use of the physician. I look on my machine as indispensable to my work, and even at a cost decidedly greater than the horse and buggy, I would still be in favor of its use.

SYNOPSIS OF A CHICAGO EXPERIENCE.

ARTHUR R. EDWARDS, M.D.
CHICAGO.

WHEN I bought an automobile over three years ago some friends laughed rather indulgently, but the machine has done exactly what I hoped for. The first months were full of surprises, stops and suppressed—as well as distinctly voiced—invectives.

Some annoyances were due to mechanical imperfections which have been removed by recent improvements, but most were due to my own ignorance of the simplest mechanics. The grinning spectators of my initial troubles were rather irritating, because I was never certain that I could locate the trouble. Nowadays nothing stops the tried autoist for more than a few minutes. The tyro doubts such optimism because of unhappy experiences with the dealer, repair man and garage keeper, who too frequently impose on his helplessness. The autoist is never happy till he knows exactly what the difficulty with his engine is; long delays and longer bills are the price of his ignorance, which is often not much less than that of the so-called mechanic.

Advantages of Air-Cooled Motor.

There are many splendid water-cooled machines on the market, but I believe that the following advantages are proved in favor of the air-cooled motors for a physician who wants to run his own car:

1. *They can not freeze.* I have run every day for three winters, through snow and at as low as 20 degrees below zero. The car can stand out of doors for hours during office hours, or even over night. No shelter is needed nor a driver to keep the engine moving lest it freeze.

2. *They do not heat.* With accessory exhausts they climb long hills and traverse muddy or difficult roads fully as well as water-cooled cars.

3. *They are lighter.* Since the heavy water jackets are unnecessary, they are easier on tires.

4. *They are more simple.*

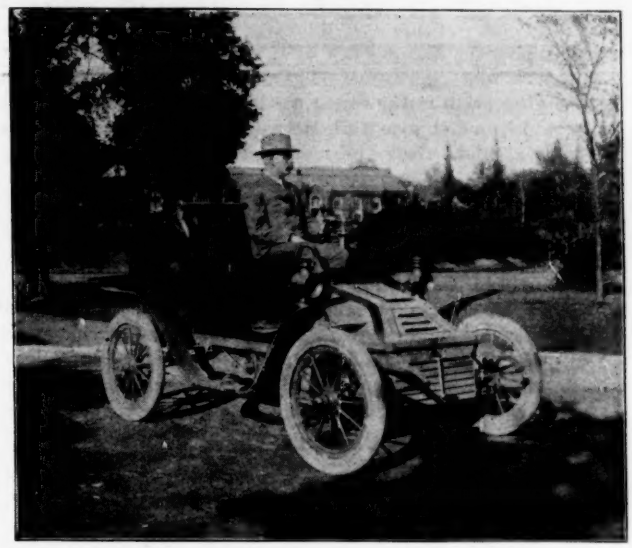


Fig. 4.—A city physician in one of the parks.

Good Service on Roads of All Kinds.

1. *Service.*—I have done all my work with my machine (136). The only time it was out of service was two half days when improved auxiliary valves were installed—a voluntary, not an enforced, interruption. Our city roads are fairly good, but I have gone through deep mud and horrible roads in town. In addition, with my wife and small boy I went to New York and back, going over every kind of road, some equaling the artillery roads of France and others full of stones, ruts, piles of gravel and huge masses of plowed turf, thrown on the roads to "improve" them. We went up steep hills, through washout, sand, deep mud and water axle-deep.

2. *Expense.*—Reviewing my closely kept expense account, my total expense for the year has been $336, an average of $28 a month. This includes $15 a month at the garage (rent, washing and polishing but not delivery, for I call for it), oil, gasoline, charging batteries, $75 for new tires or vulcanizing, and $25 for new or extra parts, accessories, tools, etc.

3. *The Daily Attention Required.*—This I figure at fifteen minutes. The machine should be well oiled every two or three days and once daily flooded—while the motor is running—with kerosene to cut out the thickened oil, carbon and dirt. The vibrator points and springs in the coil need a few minutes' attention about three times weekly, to keep the platinum surfaces even. Once or twice a week every bolt should be looked after.

How to Eliminate Sources of Trouble.

4. *Troubles.*—(a) Plugs: I have not touched a plug for five months, the accessory valves carrying off contaminating oil and carbon. (b) Vibrators: (See above). (c) A dead battery: One should always carry an extra battery. (d) Tires: Punctures are few with tires of foreign make, though the American product seems better in the last year. There are vulcanizing preparations with which the punctured tube can be made good as new when one returns home. Two or three extra inner tubes should always be carried. I have gone eleven months without a puncture and then had eight in one afternoon! (e) Chain: A broken chain may be repaired in fifteen minutes *if* there are always some master links in the tool box. Breaks are positive "heart blocks" without these links, a cold chisel and a hammer. (f) Slipping, skidding and spinning in mud, ice or snow are prevented by using detachable chains on the rear wheels. Loamy roads are very hard to travel. Much trouble is due to other meddling with or actually running the machine. Switch locks prevent any one else from starting the car.

5. *Time Saved.*—On short trips one saves half his time and even more on longer courses.

6. *Accessories.*—The auto driver must carry extra plugs, inner tubes, a few master links, an extra battery, and extra float (for the carburetor), a pump, jack and set of tools well secured under lock and key and, therefore, always at hand.

7. *Health and Recreation.*—The saving of time, the fresh air, the absorption in the car in motion and the possessing of a hobby which one enjoys while actually doing the work brings one home at night fresh and ready for his reading.

THE AUTOMOBILE IN MAINE.

LANGDON T. SNIPE, M.D.
BATH, MAINE.

CHIEF among the questions which confront a prospective buyer of an automobile are: "Can I afford it?" and "Can the machine do the work of the horse?" The first question each man can easily decide for himself after studying the cost of the machine and of the upkeep.

Uses Horses in Winter.

The second question is largely one of roads. In some localities the machine can be used with pleasure all the year, while in others a very satisfactory solution of the problem is found by using a machine in summer and fall and a horse in winter and early spring. I belong to the latter class, and after one year's trial of this plan I would be sorry to return to the permanent use of the horse.

I began using my gasoline machine (120), May 20, 1905, and continued using it till December 14, when I returned to a horse. In this period the machine never failed me, and as I was ignorant when I started and still am for that matter, this is an excellent recommendation for the machine.

An Itemized Expense Account.

The expense has been as follows:

FIRST COST.	
Cost of machine	$1,300.00
Freight	30.00
Insurance (fire)	20.00
RUNNING EXPENSES.	
Gasoline	$42.76
Lubricants	5.90
Batteries	6.65
Repairs	4.65
Labor	8.16
Accessories	18.57
Repairing tires	2.10
Total	$88.79
SUMMARY.	
Running cost per mile (2,744 miles)	$ .032
Running cost per mile (omitting accessories)	.025
Building automobile house	160.62
Registration and license fees	4.00

It is almost unnecessary to say that an expense account of a single year is liable to be deceptive, as the experience of a series of years is necessary for real comparison and enlightenment.

Great Diversion to Care for the Machine.

I keep the machine in a house 16x14½ feet, built for the purpose, and I care for the machine myself. This I find a great pleasure, and as a mental and physical diversion it is of much value. If one chooses to have a man care for the machine much time is saved compared with the use of the horse.

The simple fact that an automobile is not used the whole winter is no argument against the advisability of a physician's owning one. With a winter like the present one the use of the automobile or the horse is largely, if not entirely, a matter of personal choice. In city practice or in the country if there is little snow, an automobile in which the driver is well protected would be all that could be desired, but in Maine the horse will continue to be superior in winter. It may be on account of this fact or it may be notwithstanding this fact my enthusiasm for the machine is as great as ever, and I anticipate the enjoyable and satisfactory use of it when the roads are once more in good condition.

Unless a man expects to buy a new machine each year he should avoid the cheaper grades. If used for a series of years the higher priced runabouts are in the end cheaper. For the greater part of the year, though a machine costs a little more than a horse, it is much more comfortable and enjoyable and a great time saver.

AN OUTLINE OF THE PHYSICIAN'S IDEAL CAR.

C. E. ROGERS, M.D.
MONTEVIDEO, MINN.

I HAVE owned three cars and have traveled enough miles in them to equal more than twice around the world. My observation along the lines of design, construction, operation, etc., has been extensive, but my affirmations must be accepted as my personal opinions.

The engine should have multiple cylinders; gasoline is best and cheapest fuel; sliding-gear transmission, best type; drive, of the shaft pattern; cooling system, water (alcohol, glycerin and water for winter use); half elliptical springs; double tube tires; storage battery for spark or ignition; acetylene lamps (lens mirrors and gas tank), etc. An ideal car for a physician should be single seated (capacity two persons only); have plenty of carrying space; weigh not more than 1,000 pounds (less if possible); possess 12 H. P.; have a ground clearance of not less than 12 inches; have a full top; a speed of 40 miles per hour and cost not more than $1,000. Type of engine, transmission and drive, mentioned above, allows of easy access from upper side of car to all working parts and is easy to care for. Gloves only need be soiled in care of car, such as oiling, filling gasoline tank, etc. Wheel steer is generally adopted.

Price, weight, ground clearance, etc., mentioned above, are the lacking essentials at present of my idea of a model car, but leaving these questions out, several cars made at the present time correspond closely to my ideal.

Would Not Accept a Team as a Gift.

I have never been stalled on the road with my present car (123), and it has given me no trouble whatever. I have never paid out a cent for repairs, and have covered nearly 3,000 miles with it in all kinds of weather and on all kinds of roads. I can make twice the number of miles with it on good roads that a team can make and with more comfort and at an expense not to exceed one-fourth of what a team would cost. A team would not be accepted by me as a gift for use in practice. I do not mean to say a team is useless, because when the snow is deep and drifted badly, it discounts any automobile yet made. The fact is, under such conditions, an automobile is worse than nothing, but exclude snow and snow drifts, and the horse is simply "not in it" with the automobile.

A word about sliding transmission, three speeds forward.

What is known as the intermediate gear is of incalculable value for time making as compared with a two-speed forward transmission. Many times when the roads are too muddy or rough to run on fast gear the intermediate works beautifully. Also, when a hill can not be made on fast gear. Shifting from a fast to slow gear on a two-speed forward transmission makes too much difference in speed of car. Here is where the intermediate gear shines.

Members of the profession, feeling the need of better help in time making, get rid of your horses and buy an up-to-date automobile. If you desire to take your family or neighbors out for pleasure, buy a touring car, but for the practice of medicine, a runabout.

THE CITY PHYSICIAN SHOULD HAVE AN AUTOMOBILE.

J. B. BOUCHER, M.D.
HARTFORD, CONN.

I WAS a great lover of the horse until two years ago, when I transferred my affections to an automobile. The first year I ran a single cylinder air-cooled machine 5,000 miles. It was out of commission but one day. I then sold it and bought a two cylinder of same make (117). This covered 5,000 miles during the past season and was out of commission about two days. It has been on the road all winter, excepting about two weeks in deep snow. There is no comparison between it and the horse for convenience. I keep it in a barn back of my office, it is ready night and day, it is cared for by my man—I believe that's one reason why I have had such good success with it. It may be my notion, but I have little faith in the garage.

Costs Same as Horse in Long Run.

Now for trouble. Last year I had only one tire puncture, this year three or four. I believe the large tire is more economical. There are a number of little things that must be looked after; small adjustments, etc., most of which I think can be done under the instruction of the owner if he understands his machine. I would advise the physician to learn to know his machine thoroughly, and not to depend on others or he will have many an annoying stop. As to economy, during the season repairs, gasoline, oil, etc., cost about one-half as much as a barn bill when you require two horses, but when you take into consideration tire trouble (ordinary wear) and the depreciation in the value of a macine from year to year, realizing that on a $1,600 machine run one season you would have to sacrifice five or six hunderd dollars if you sold it, I question if there would be much difference in the price of automobile and two horses at the end of five years. I believe the balance, if any, would be in favor of the auto, but, as I said, the convenience far surpasses the trouble.

Far More Pleasant Riding in Auto.

There is another side to it: You can accomplish much more work in a day with the auto. There is a fascination about the machine that grows and makes the work of travel a pleasure instead of labor, as is often the case with a poor tired horse. I believe the city doctor can run a machine with better success than the country doctor. I also believe that if I practiced in the rural districts I would not change the faithful horse that is always sure, although a little slow.

TESTIMONY FROM THE SOUTHWEST.

J. A. BOWLING, M.D.
ALVA, OKLA.

I AM an enthusiastic advocate of the auto for the physician. I live on the Salt Fork of the Arkansas River, and up and down stream the roads are sandy and very hilly, but away from the river the roads are generally good, except after going west and south 15 miles, then the country is sandy and hilly again. But I have not had any trouble yet on any of these roads.

I have a single-cylinder, copper-jacket, water-cooled gasoline engine, rated at 10 horsepower, chain drive with detachable tonneau, planetary gear, two speeds forward and reverse (132). By spending one-half to one hour each day, looking over and making any adjustment that may be needed, I am always ready for emergency calls. I have two oil lamps and one large acetylene lamp, which give ample light for night driving.

The cost of running my machine has been less than keeping one horse so far. I have 3x30 pneumatic tires, but I believe solid cushion tires would be best, for they would last longer and do away with puncture troubles.

Cold Weather Stole a March on Him.

About the only trouble that has amounted to anything was a freeze-up this winter. I made up some antifreezing solution, but waited for cold weather before putting it in; but the cold weather came in the night, and when I arose in the morning, behold, my radiator was frozen and bursted. I sent for a new radiator, but before it came a repair man fixed the old one. I am reserving my new radiator until after freezing weather is over.

Had it not been for the freeze-up I would not be out one cent for repairs, except I broke one leaf in my front spring, which I had to have welded.

A doctor should study his car and understand its anatomy and physiology; then if something goes wrong on the road he can remedy the defect and go on, and will not be compelled to send for the repair man and to suffer delays and expenses.

Saves Him Time for His Practice.

I received my car Oct. 11, 1905, and have run about all the time since, except when the roads were very muddy. I do not believe it pays to run an auto when the roads are muddy and slippery, because if you try to go fast you are liable to skid into the ditch or into the fence. I often make drives into the country of 25 to 30 miles, and if I use a team it will take me all day or all night, and the team is nearly played out and so am I. But with the auto I can easily make the trip in one-half of the time, and thus I do not have to neglect my patients at home so long.

Taking it all in all, I would not like to be deprived of my auto. Besides making calls in one-half the time, there is something about the auto that is infatuating, and the more you ride the more you want to ride.

THE QUESTION OF ROADS.

A. A. BONDURANT, M.D.
CAIRO, ILL.

THE practicability of the automobile as a vehicle for physicians should be discussed honestly and fairly from every viewpoint. One should weigh well the opinions of all, both of the enthusiast who has money to waste, of the other extremist who either has little means or from custom will not release a dollar until sure of its return with compound interest. I have had four years' experience with cars (using two since last July).

The Auto Will Not Succeed in Deep Mud or Sand.

If this was for a newspaper I should be tempted to evade the truth in deference to our city, but as only doctors will see it, and as they are educated to overlook the shortcomings of people, I will say we have as few good roads as any place I ever saw of its age, size and amount of business. More than half of our streets are not graded, and those that are are poorly kept. They are uneven; crossings are above the surface and mud is brought on them by vehicles from other streets. With our variable seasons, this is for its size about as undesirable a place for autos as one could easily find. An automobile will not do good work in sand or mud. A car with sufficient power can go in some mud and sand, but if I expect to encounter very much of either I leave my car at home, as the wear of machinery and worry of such travel does not justify the attempt.

A physician with no mechanical taste shouldn't buy an automobile unless he wishes to keep a chauffeur.

My experience is with gasoline, water-cooled cars with good tops, and yet they are very unpleasant things to handle in cold weather, often hard to start and requiring too much exposure to the cold if they need adjusting away from barn.

Expense has been about the same as that of my horse and cab. I do the oiling and some minor repairing. I keep the machine at home and run it myself for the convenience of having it ready at all times. I use it about nine months in the year, depending on the winter. I have thus spoken plainly of the disadvantages, but I will not be without one, for when not in use there is no expense and attention required.

Can Do More Work with an Auto.

My first car was accidentally burned and cost me $220 to rebuild. Not long before that my $300 horse sickened and died, so I eliminate possibilities. I have had no serious accident from an auto, but several slight injuries, with narrow escapes, from severe results from horses; chances probably about even. I can do more work with a car than any other way. It starts quicker, goes more rapidly, stops on shorter notice and requires no hitching or unhitching. I have made well-paying calls at a distance which would not have been conveniently made in any other manner. The car does not fret at flies or mosquitoes, neither is it punished by heat, cold or rain.

Fig. 5.—In winter, in front of the office. No need of sympathy for the poor horse.

I not infrequently make a call and return to my office by the time the livery man would have gotten my horse to the office. It being easy to make calls, I am more apt to do it at the desired time. I do not have to wait for the car to eat and rest. With good streets and roads distance is practically eliminated. My first car is single vertical cylinder, of 3½ H. P., weight 800 pounds (121). It was a high-priced car and is doing good work now when needed, but the reach is not great enough for comfort on rough streets. But few times in four years' hard service was that car brought in by other than its own power.

My second car, running since last July, including 400-mile trip from the factory, has never been assisted home. It is a double horizontal cylinder of 16 to 18 H. P. (122), weight about 1,400 pounds, rides with more comfort and I feel safer in it at a distance from home than in the small car, because of its greater power and second cylinder, but it is not as convenient in narrow streets, where short turns are desirable at times. Gasoline averages about three-fourths of a gallon a day (11 or 12 cents) for old car and about twice that for the new.

AN IOWA EXPERIENCE.

M. G. SLOAN, M.D.

DES MOINES, IOWA.

A VERY expensive experience has convinced me that it decidedly doesn't pay to buy a "cheap" machine. My present machine (114) is almost two years old, but as nearly as I can tell is just as good as new. I tried a cheap auto (115) for two years previously, and an account of the grief of all sorts that I had would fill a good-sized book.

In country practice—in Iowa at least—it is simply impossible to use an auto a certain portion of the year on account of the deep mud. Makers may make all the claims they choose to the contrary, but it isn't so that they can be used successfully in deep mud. On paved streets there is no trouble in running a good machine every day in the year, regardless of the weather, unless the snow is deep enough to stop street-car traffic.

I am sure an auto is less expensive to keep and run than is a team of horses; it is very much more satisfactory because of the constant readiness for a quick start and the speed with which a call can be made. Very often I have been able to get to a patient two miles from my house in less time than would be consumed in getting a team ready to go.

I would advise no physician to buy an auto unless he has some mechanical genius in his make-up. The most simple derangement of the mechanism will prove his undoing. Tire troubles are most vexatious of all. Lately I have placed solid rubber tires on my rear wheels, and, although they do not ride quite as easily as pneumatic tires, they are so decidedly superior in every other way that I consider them a success.

THE ELECTRIC AUTOMOBILE.

GEORGE D. KAHLO, M.D.

INDIANAPOLIS.

FOR physicians' use the automobile is no longer an experiment; it is a practical utility. In a city with comparatively level roads, good pavements, and where a limited distance is covered, the electric machine, in my judgment, is the most practical vehicle which one can have. Its particular advantages are simplicity of operation, cleanliness and absence of noise.

My experience with this type of vehicle covers a period of about eight years. My first machine (118) was one of the earliest models and was not a complete success because the electric machine had not at that time been fully perfected and because so few persons understood its mechanism that it was almost impossible to have it properly cared for. After returning to horses for a period of two or three years, I bought another machine (119), which has always given me most excellent satisfaction.

Comparison of Electric with Gasoline.

Such a machine sells for about $1,000, and its cost for maintenance in a garage is somewhere in the neighborhood of $35 per month, the principal items being: Storage, cleaning and delivery, $20; tires, $8 to $10; and incidental repairs, $3 to $5. The life of a battery in constant use is usually from fifteen to eighteen months, and the cost of new plates will be from $100 to $150, depending on the number of cells.

The initial cost of a gasoline runabout is somewhat less and the expense of maintenance is less, but such a machine is not always to be depended on, and styles in gasoline machines have undergone so many changes that when one takes into account the loss in replacing an old machine with one of a late model the total outlay is considerably more. On the other hand, very few changes have been made during the past four or five years in the style of the electric machine, and these have been largely in improvements, the installation of which involves but comparatively slight expense.

The gasoline touring car is undoubtedly the most luxurious of all vehicles, but to the majority of physicians it is almost too much of a luxury, for not only is the original outlay considerable, but the cost of maintenance is correspondingly great, and besides, for making a professional visit, a lighter and simpler machine is more convenient.

Compared with horses, automobiles of all types offer many advantages, especially in a city practice. One can get about so much more quickly and one has not to consider whether the horses are going to run away, whether the driver is having his ears frozen and, last but not least, one is relieved of the constant companionship of a coachman. In a country practice, where long distances must be covered over rough roads, I can readily see how horses would be more serviceable.

My machine is delivered at my residence at 8 o'clock in the morning and is rarely back in the garage before midnight. Whether I am at home, in my office or visiting a patient it is always at the door, and it would take three or four horses and two coachmen to do the equivalent amount of work, to say nothing of the greater convenience and comfort in getting about.

FOUR YEARS' SUCCESS WITH A STEAM CAR.

J. G. HENRY, M.D.
WINCHENDON, MASS.

MY interest in the development of the horseless carriage was greatly stimulated in the spring of 1900 by a friend who purchased a small steam runabout, t first automobile in town and one of the first in this section of the state.

During the ensuing winter I placed an order for a two-seated runabout (165) with a firm who have since become one of the best known makers of steam cars in this country. After a vexatious delay of several months, I secured my car late in the fall of 1901, and have used the same machine since, doing practically all of my work with it for about half of each year.

For some years before getting the auto I had kept three horses all the time. Since then, from about May 1 till late in October, I have kept only one in the stable. I have kept a careful expense account during this time, and know exactly how much it has cost each year for operating expenses and repairs.

The first cost of my car was $600. I have since spent $180 for various improvements and changes that can not be properly charged to the repair account. These items include lamps, improved steering gear, extension front and dash, clock, odometer, touring basket, etc., and also the very important item of changing from a chain to a gear drive. My engine is now geared directly to the differential and being entirely enclosed, is much easier to keep in order and there is no chain to bother with.

I take the entire care of my machine and make all of the minor repairs that I can and thus obtain a better knowledge of the machine and its capabilities, besides keeping my repair bill down. Each morning I spend from twenty to thirty minutes in getting it ready, filling tanks, oiling machinery and firing up.

Steam Up All Day.

After making my round of calls, the car stands in the stable with the pilot light on the remainder of the day and at any time can be made ready in two minutes for a fresh start. During most of the season it is under steam from 6:30 a. m. till bedtime. As I usually have one horse in the stable I plan to use that in bad weather and for night calls, but my long trips I do with my auto, day or night. I consider this machine as reliable as a horse, and only twice in the four years has it been necessary to be towed home. It has proved a great time saver, especially on my long trips which I can do in about half the time required with horses, and my long rides in hot weather are delightful and never tiresome.

The gasoline consumption I rate at about one gallon for 10 miles. As my gasoline tank holds 13 gallons I can run at least 125 miles without refilling. The water tank holds enough for 20 or 25 miles on ordinary roads. Taking water with the syphon at any tub is a very simple matter and requires but three or four minutes which is a convenient time for oiling the engine.

I have made it a rule to replace any part of the machinery as soon as it showed signs of wear, and I think this plan has saved me some expense, and now after four years of hard service the car looks like new, runs as smoothly as ever, and all vital parts are in excellent condition. I am now putting on artillery wheels, with 3-inch clincher tires in place of the old 2½-inch single tube, and am also adding a folding top. With these improvements I expect to find it a much more comfortable vehicle in bad weather, easier to clean and hope that my tire bill will be less. The machine weighs about 1,100 pounds with the tanks filled, and easily carries my family (combined weight of four, 475 pounds) over all roads we have yet encountered. It is very smooth and quiet in operation, rides easily, is very fast and a great hill climber.

Carries a Fire Extinguisher on His Auto.

Perhaps the principal objection to any steamer is the ever-present possibility of fire. I am blessed with a large bump of caution and early added a fire extinguisher to my boiler, consisting of about 5 feet of hose connected to the blow-off and carried coiled under the rear seat. In case of need I can instantly turn a jet of steam under my full boiler pressure on any part of the vehicle. Another defect is the occasional blowing out of the pilot light when the car is standing on a windy day. It is annoying when in a hurry to find the fire out and raw gasoline dripping from the burner.

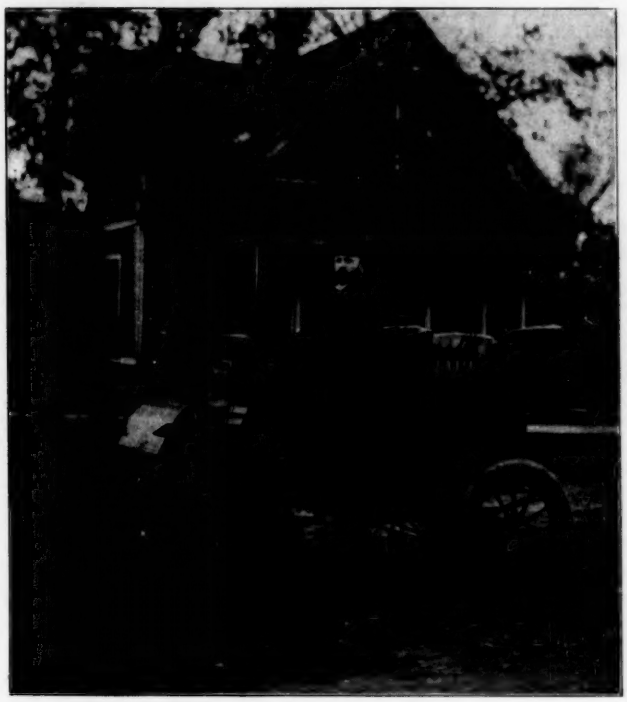


Fig. 6.—A South Dakota physician about to start for his country calls.

The automobile has not only proved a decided help in my business, but has been a great source of pleasure to my family. With it we have had many delightful trips each summer, sometimes going 150 miles in a day and sometimes but a short distance to some pretty lake or other point of interest. As a means of summer recreation I consider the automobile ahead of anything else.

I stable my car in a small house 10x12 that stands in my back yard, about 50 feet from the house and stable. This is fitted with a small work bench and vise and is a safe and convenient house for summer use. A year ago, in making an addition to my office, I made a basement room for winter storage. This is 15x9 feet with cement floor. It is steam-

heated, has running water and electric lights and makes a nice work room in cold weather.

I have had but little trouble with horses and do not think anyone need be deterred from getting an automobile on that account, provided that he is willing to exercise proper care and a little judgment while on the road. If I meet a horse that shows signs of fright I make it a rule to stop at once, and if necessary I lead the horse by and thus have obtained the good will of many drivers.

Two Hundred and Twenty-five Dollars a Year Expense.

As the operating expense is to the most of us an important consideration, I hereby append my full account for repairs and gasoline for the four years, during which I figure my mileage at something over 16,000.

The first year my repairs and new parts amounted to $36.60; second year, $46.07; third year, $27.30; fourth year, $11.04, making a total of $121.01. Add to this for retouching, paint and varnish three times, $26.42, makes a total of $147.43. For new tires I have paid $110.70 and for tire repairs $20.25, making a total tire bill of $130.95, making a total for repairs and tire expenses of $278.38.

The amount paid for gasoline for the four years was $207.52, and for oil $3.75, making the total cost for all operating expenses for four years of $489.65, an average of $122.41 for each year.

This is the debit side. To offset this the machine has saved me the board and care of two horses for twenty-two or twenty-three weeks each year. Ten dollars per week is certainly a conservative estimate of the cost of board, care and repair of equipment for two horses, or an average of $225 a year. Deducting from this the cost of operating the machine, leaves a net saving in favor of the auto of a little over $100 per year. It has also saved considerable in railroad fares, and the amount of enjoyment it has afforded I can not compute.

I am still looking for the ideal doctor's car, and as there seem to be many minds on the subject, will briefly give my idea of what it should embody. I think it will be a gasoline machine of four cylinders, 12 to 15 H. P., air-cooled motor, long wheel base, solid rear axle, and most important of all, have wheels at least 40 inches, with solid tires. It should not weigh over 1,200 pounds, and the cost ought not to exceed $600. Such a car, if honestly built, will be a boon to the country physician, and with it he ought to be independent of horses all the year round, except perhaps in the deepest snows. After nearly five years' experience with small wheels and pneumatic tires, I predict that the car of the near future will be equipped with large wheels and solid tires.

I hope that none of my readers who are thinking of discarding the horse and taking up the automobile will be too much influenced by my experience. My advice to such is that unless they have had a mechanical training, or a natural taste for machinery, it would be well to get with the car they purchase, of whatever kind, a written guarantee that it will afford all the trouble they want.

TIRES AND ROADS ARE THE CHIEF AUTOMOBILE TROUBLES.

W. A. PUSEY, M.D.
CHICAGO.

MY experience with the automobile has extended over five years, and has made me an earnest supporter of it as a means of recreation and as a time saver. When I can use my automobile instead of the cars it converts my traveling about the city from a laborious task to a distinct recreation, so that when I am confronted with an automobile expense account that rather hurts my conscience, I try to console myself that I have had the worth of my money.

The difficulties about automobiling are the initial expense of the machine, the expense of maintenance and roads.

I began automobiling with a large, two-cylinder runabout (129), of the best make, which I used for four years, and I have since used a standard four-cylinder touring car (130). I believe now that neither machine was a good purchase from the standpoint of economy. As far as I can see, a runabout, such as is sold at from $700 to $1,000, would have answered all of my purposes just as well and saved me a good deal of money. For the doctor's use on good roads I believe such runabouts are the best machines, and that his chance of getting satisfactory service out of such machines is quite as good as with the higher-priced machines. He won't get as much speed and he won't get as much style, but he will get all the speed he can use and escape the police, and his machine won't look very stylish after the first year, anyway.

Another Endorsement of Solid Tires.

My expense of maintenance has been high; but with care and intelligent use I think I can see how a runabout could be maintained at an expense of about $100 per annum. The most uncertain factor in expense, as it is in reliability, is tires. I eliminated that four years ago by putting solid tires on my machines; not any of the patent tires, but plain soft rubber tires (131), with a width at the base of 2½ inches and a height of about 2 inches. I had them first on my runabout of about a ton weight, and I have them now on a little heavier touring car, and I wouldn't have any other kind. As far as I can see there is no difference in the way the machines rides and no difference in the wear and tear on the machinery, and none of the other things happen that are urged as objections to solid tires. They are really softer than well-inflated pneumatic tires. I don't know how they would work on small wheels, say 28-inch wheels. Fortunately for my experiment, the wheels of my machines have been 34 and 36 inches in diameter and my machines have been very heavy and strong. I would be afraid to put solid tires on a machine if I had any uncertainty about the strength of the front axle.

Mud a Waterloo for the Auto.

In the use of an automobile you have to consider the roads. Over roads that are solid and even fairly smooth, the automobile is all right, but the ordinary automobile is impracticable in mud or in deep sand. You can pull through mud or sand six inches deep for an indefinite number of miles, but it is a procedure that you don't want to repeat often, and you are liable to get into trouble every time you try it. When it comes to bad country roads in winter time, such roads that you have to let a horse go at a walk in a buggy, the automobile is practically out of consideration. A horse can easily pull a buggy through mud that puts an auto completely out of service. In country practice as I have known it, I am sure most of the trips could be made to good advantage with an automobile during the season of dry roads. From the time the roads get bad in winter until the time they dry up in the spring, I should not expect an automobile to be of any service over dirt roads.

THE MERITS OF THE SINGLE CYLINDER CAR.

J. P. HETHERINGTON, M.D.
LOGANSPORT, IND.

IN July, 1903, I purchased my runabout and have used it continuously every day in the year—except when in the paint shop—since that time. I never rode behind my horse since purchasing the machine, and have not owned a horse for over two and a half years, depending on the machine except for an occasional livery horse when the roads are too muddy.

I watch the machine closely, am careful with it, and as a result it has never had a horse hitched to it. It is in use every day in the year, and I find it as reliable as a horse. It is a little more expensive to maintain—counting repairs, garage, etc.—than one horse, but it will do the work of two or three, is swift, tireless and needs less care.

The first two years I kept it in an ordinary livery stable—hot in summer and cold in winter. The last year we have had a garage where it is washed and oiled, but I never allow it to be repaired or to have anything done to it unless I am present. I know its peculiarities, and by watching it closely, it needs few repairs.

Comparison of Single Cylinder Cars and Others.

Being a single cylinder engine it is very simple. A double cylinder runs more nicely, but a four cylinder is still better. If one does not care for complication, the four cylinder would be very desirable. It is about the same with the transmission. The planetary is easier handled, but allows only two forward speeds. The sliding gear or individual clutch gives a third forward speed, which is very desirable. One of my colleagues has a sliding gear. The transmission is completely worn out in less than a year, and his machine is now in the garage useless, waiting for a new transmission that will probably cost more than my repairs for a year, while I am using the same old one. My machine is light, with lower power and lower speed. I can go as fast as any man should on our roads. If I get stuck in the mud or snow I can push it out because it is light. If he gets stuck his is too heavy to get out without help. His power increases wear, uses more gasoline and is more liable to break something. His machine is heavier and harder on tires. My machine, after nearly three years' use, seems to be as good as ever.

In deep sand, snow or mud a machine is almost useless. In shallow sand or mud it pulls hard. Slick mud requires a chain wrapped around the rear tires so they will stick. Shallow, dry snow or dry ice is no impediment. Wet snow or wet slick ice or wet streets make the wheels slip and require care in swift running. Rubber will not stick well to anything wet. I never hesitate to run fast on slick ice if it is dry.

Never Expects to Own Another Horse.

In choosing a machine a physician should, above all else, get one that has an engine that will start promptly in cold weather. Nothing will disgust a man quicker than pumping and wearing himself out on a cold or rainy day trying to start a balky engine. My single cylinder, planetary transmission, tiller-steered, black-colored car (124) has done good service for nearly three years, and will soon be put in the paint shop to prepare for another year. I never expect to own another horse.

THE KIND OF AUTO THE PHYSICIAN NEEDS.

LOUIS LEROY, M.D.
NASHVILLE, TENN.

BEFORE purchasing an auto the first thing to be decided is the use to which it is to be put, for a machine is in a measure a carriage, and it is obvious that a surrey is not calculated to meet the requirements of a man needing a buggy or phaeton. It is therefore presumed that to practice medicine a physician will desire a machine to take the place of a buggy or phaeton. That point being settled, he is at once in a position to exclude any consideration of the heavy and expensive touring cars. As the auto may be used as a pleasure vehicle, there are a number of cars which have been made with a detachable tonneau, which can be attached in a very few minutes, thereby converting a runabout into a car capable of carrying four passengers very satisfactorily, and still not requiring the extra weight to be carried nor the tonneau to be exposed to the inclemency of the weather during the work-a-day use of the machine.

Must Be Kept in Good Order.

I should emphatically advise against any physician buying a car who lived at any distance from a well-equipped repair shop, as the life and satisfactory service of the car depend more on keeping it properly adjusted and "trued up" than on any inherent quality of the mechanism. With the present development an auto will give better and more satisfactory service than horses, at a lower price, provided it is driven with the same degree of care and intelligence, and the more a man has been in the habit of using a whip with his horse the less satisfaction he may hope to enjoy from an auto unless he decides early to change his tactics. The average cost of keeping an auto in this city is $20 each month. That figure will vary according to the amount of use demanded, and of course the current prices of repairs and storage differ much in different locations. In Nashville the most satisfactory arrangement is to pay a moderate amount—$5 a month—for storage, and extra for washing, polishing, oiling, etc., so that the cost is in exact ratio to the service obtained.

Independent of Railroads and Trolleys.

Many prefer to stable the car at home, and there is no doubt that this is better, especially where any amount of night work has to be done, for, with a gasoline machine, one can be at his destination in about the time required to harness a horse, a feature of some importance, especially in emergency calls. Again, if a man will take the trouble to familiarize himself with his machine, he can very readily dispense with a driver, thereby saving nearly the cost of maintenance. Where the work is more or less scattered and the distances are moderate, a good deal of time can be saved, at least an hour a day, and in a country where the roads are good and the railroad or trolley service only fairly convenient, an auto renders the physician entirely independent of them for consultations or occasional visits up to 15 miles or so.

In the case of the large touring cars, the question of steam or gasoline motors is a debatable one, but for a physician's runabout there seems to me to be no chance for argument. The gasoline motor has every advantage, and the one point of having to wait fifteen minutes sitting around in the cold

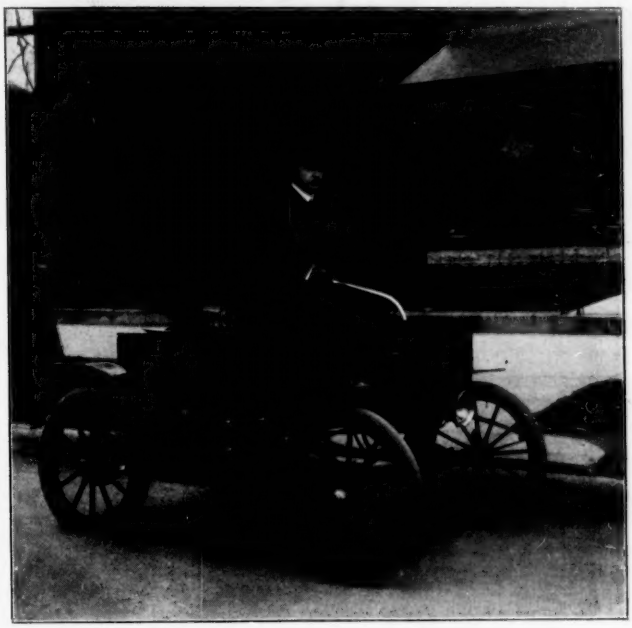


Fig. 7.—The comfortable electric.

waiting to "get up steam" before being able to start on a night call is in itself prohibitive, not to mention about double the consumption of gasoline when it is used as a fuel or the danger from fire when gasoline is confined under pressure in the neighborhood of a flame.

With heavy cars, say 1,800 pounds and over, the sliding gear type of transmission with three speeds forward gives the only satisfactory means of transmitting the power to the driving mechanism, but a good type of planetary transmission is far more convenient to manipulate, and as made now by several of the good manufacturers, wears as well, if not better than the sliding gear, especially in cars of about 1,200 or 1,400 pounds weight.

Water-Cooled Cars Are Best.

A water-cooled car is superior to the air-cooled system, as since the discovery of the value of wood alcohol as anti-freezing mixture, there is no danger of trouble from any degree of cold, and there is no doubt that machinery will wear better at a temperature of 200 F. or less than it will at 400 F. or over, as is sometimes reached by the air-cooled type. With tire chains to prevent skidding in the mud and 10 per cent. wood alcohol and 10 per cent. glycerin to prevent freezing, a motor car is a practical proposition over any road or climate that a horse and buggy can travel.

THE AUTO SUPERIOR TO THE FINEST BLUE-GRASS STEED.

CHARLES MOIR, M.D.
LOUISVILLE, KY.

FOR two years I have been using an automobile, and my opinion of the difference in the two methods of getting to my patients is best described in the following sentence: If some one were to make me a present of one of the finest horses in our blue-grass state; add to that one of the finest vehicles that could be built; and then add a promise to maintain the outfit on condition that I use it in preference to my automobile, I would certainly refuse it.

Why the Auto Is Superior.

My reasons for this extreme preference are:

1. *The Rapidity of Getting Around.*—I can see more patients in one-third the time and devote more time at the bedside of my patients than I could when using a horse and buggy. I also get more time at home for study and for enjoying the home comforts.

2. *Cost of Maintenance.*—This is less than for the horse. The day is never too cold nor too hot, and no degree of inclement weather ever stirs up that humane spirit for an auto that would naturally appeal to anyone in the use of the horse. So I never think of street cars or calling carriages in bad weather, but make my machine take me around. So by using my auto all the time, keeping it in good order and not waiting until it is almost ready to quit running before having it attended to, the cost to me has not been over one-half that of the horse.

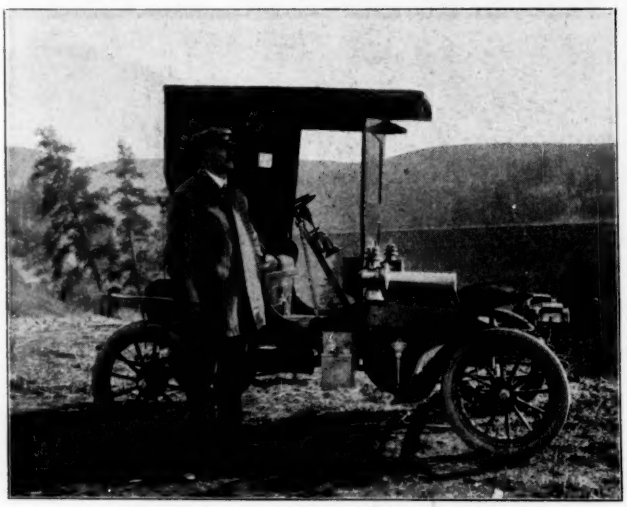


Fig. 8.—A Pacific coast surgeon's car, with characteristic scenery in the background.

Guyed by the Madding Crowd.

The first two months that I used my machine (I had scarcely any trouble at all after that time) parts of the mechanism would need adjusting. I would depend on the experts to do all this, but often these parts would get out of order while running along the street. When you stop to fix anything about an auto it always attracts a crowd, and I seemed to be a special target for remarks about like this: "What's the matter, Mister?" "Won't she run?" "Your trolley's off," etc. I thought the vocabulary of forceful and expressive language ought to be rewritten for me to express my opinions of autos and of the crowd. Then I would have to wait for a specialist to come and get me started. This, of course, added to the cost of keeping up the machine.

P. G. Course on the Auto-Cadaver.

In desperation I came to the conclusion that the fault was largely with me. I did not know the working of the machine, so I bought a pair of blue overalls, put on an old coat and made a thorough dissection of it; result: no more street scenes, as I can get it started now before the crowd gets around; and, as for the vocabulary of interjaculatory speech, I do not need it re-written, and am now going to teach a Sunday school class.

The Saving Effected by Learning the Mechanism.

The expense of running my machine has been about one-half that of the horse. When using a horse and buggy the cost of maintenance was $30 to $32 a month. The cost of maintenance for my auto has averaged $19 a month since I learned how to keep my machine in repair. This includes gasoline, repairs, tires, etc. Before that time I used up $50 of $60 a month. I use a light, two-passenger gasoline runabout car (145), 4½ horsepower, single engine, top and full storm protectors. Its cost was $700, complete.

3. *Pleasure.*—After a hard day's work, particularly in the summer, my wife and I take a spin to some of our beautiful parks. We return refreshed and ready for a good night's sleep.

In conclusion, let me advise all of my medical friends who are having trouble with their autos to make a thorough dissection of them, and, as has been my experience, they will find most of the trouble in the nervous system, or, in other words, in the electrical supply.

As the English king said: "A horse! A horse! My kingdom for a horse!" I say, "An auto! An auto! My kingdom for an auto!"

STATISTICS ON AUTO, HORSE AND PULSE.

CHARLES P. SYLVESTER, M.D.
DORCHESTER, MASS.

WISHING to be able to compare accurately the expense of my machine (170) with that of my horse and two carriages, I entered in their respective diaries every cent expended, either directly or indirectly, on them. For instance, on May 1, 1904, the first day on which I drove the machine, two punctures and several secondary hemorrhages from the wounds, necessitated its detention over night in a roadside hospital several miles from home, at which latter place I arrived at 10 p. m., weary and footsore and experienced. One dollar for dinners by the wayside and 10 cents car fares were charged that day against the auto.

An Exact Cash Account.

Such entries as the following will give an idea of the completeness of the comparison: Auto hat, coat and gloves, $11; license and registration, $4; loss of eyeglasses while raising a 30-mile breeze in the woods, $5.25; gasoline, $1; repair of bicycle which ran into me, $2.50 (several dogs which tried a similar blackmailing scheme were repaired by me without expense). So the items were entered until, at the end of seven months, when I stored it for the winter, the total amount was $121.65. I deducted from this amount $10 which which was paid me by a patient for a 25-mile ambulance service to a hospital.

As this is one of the uses to which one can sometimes put his machine, when he could not his horse, it seems fair to deduct the amount, leaving a balance of $111.65.

There were sixteen weeks in the summer when the auto was stored in my own stable; so to make the comparison fair, we will add $48, making $159.65. The care of the machine during the sixteen weeks is already included in the $111.65.

Now, for the same seven months, with my bay pacer, Red Devil: his board and lodging bill each week was $6 half the time and $7 the other half.

In this account appear: Repair of check-rain, 65 cents; cooler, $4; sugar, 8 cents; veterinary fee for colic, $3; gin, 50 cents; hire for another horse, $3; shoeing, $4; repairs on horse and carriage out of commission ten days as a result of steamrollerphobia, $8.35 (and the patient to whom I was hurrying at the time moved away without paying his bill).

Saves Money By Auto.

The total for the seven months amounted to $268.10. As with the auto, there is one credit—both the account and to

the horse—$8 for winning second money in Hull Old Home Week free-for-all ($50 which I lost backing him for first place is not entered).

Therefore, my auto cost me for first seven months just $100.45 less than my horse.

My machine was stored in my own stable during the winter at no expense. I could have stored my horse there, but it would have cost at least $3.50 a week for his board and care, which illustrates the fact that one does not have to feed or exercise a machine unless disposed to.

The total expense for the auto for the same period the following year was $173.80, or $52.15 more than the previous season, $25 of which was paid for painting. The tire bill was about $6 more, while the only repair bill on the machine was $20 for a very thorough overhauling in the spring, $2 for repairing chain, which broke on two different occasions, and $6.25 for pump. Excluding the painting and overhauling, my expenses were less than the first year.

My car received plenty of exercise, for during the summer months I use it between my Boston and Hull offices, 23 miles each way, doing about 7,000 miles in the two years. Although I had no pedometer on my horse, it is safe to say that he made no such record.

Excepting the chain and pump and an occasional tire, I had no troubles, except with the police. They were very lenient, or my expense would have been higher.

The sale of my equine outfit was a natural sequence of the above experience; therefore I can figure approximately the depreciation. The original cost of each outfit was about the same. The horse and carriages, after three years' use, sold year. Add to this $484 which it cost me annually to keep the same, and the expense yearly is $600.

An $800 auto would not depreciate over $800 in four years, or $200 a year. Add to this what it has averaged me for twelve months, $240, and we have $440 for an auto against $600 for a horse. Now, if you should compare the cost per working mile, which should be considered in order to make the comparison really scientific, the result must be greatly in favor of the automobile.

I also have had a similarly pleasant three months' experience with an electric runabout in my city work, and only gave it up, because, on lung runs, it would not answer the purpose.

Effects of Motoring on Pulse and Health.

Now, let me end this paper with an interesting observation on my pulse. Believing that automobiling is a transition from the simple life to the pace that kills, I recorded my pulse on several of my first and fast long drives, being careful not to inflate my tires or to crank my machine before starting. The result was always an increase of about six in the number of beats per minute, with an increase in the tension. In a few weeks the pulse remained at the high level and not until the end of a midwinter vacation did it return to normal.

Increased exercise might have been the cause, but in my mind it was due to a chauffeur's responsibilities regarding the police, public and passengers, order reversed. (The public's pulse probably went higher.) This may be a form of auto-intoxication which we should bear in mind in examining our patients.

Therefore, if the danger and expense to health, traumatic or otherwise, could be carefully figured and itemized, the complete comparison between horse and auto might pretty nearly agree with the law of physics, that action and reaction are opposite in direction.

NINE MONTHS FOR SIXTY DOLLARS WITH A FIVE-HUNDRED-DOLLAR AUTOMOBILE.

EUGENE F. TALBOTT, M.D.

GRINNELL, IOWA.

IN 1899 I purchased a light steam runabout (126). After about three months' use, at an expense of $100 a month, I put the thing away. It was so very unreliable that I will not inflict on you any of my experience in that busy three months—not busy attending the sick, for the auto took first attention and a great deal of it. Well, the auto died, and now is buried in my memory, although it haunts me still.

Used Up One Pneumatic Tire Each Month.

The dose, however, was very effective in curing me of motorphilia, and I remained cured until the spring of 1905, when I purchased a gasoline runabout (127), single cylinder, at an expense of $500. My engine is water cooled and in winter I use a solution of glycerin, wood alcohol and water and have no trouble. After nine months' use of the auto, I would not be without one, although the expense is more than keeping a horse. My car had single-tube tires. I know better now. My car used up six tires in as many months, which made it necessary for me to quit either pneumatics or automobiling, as a business proposition. I quit pneumatics and put on a popular solid tire and after three months' use I can say I wouldn't have anything else. With full elliptical springs the car will ride as easily as pneumatics. The only difference I am aware of is that in turning a corner the car will skid more if going fast. In mud roads, as we have in Iowa, the pneumatic tire is too wide to go into the rut made by wagon wheels, and the solid, being narrow, will go in same rut, a very great advantage in rough and frozen roads. The satisfaction of knowing that when you start on a trip you are going

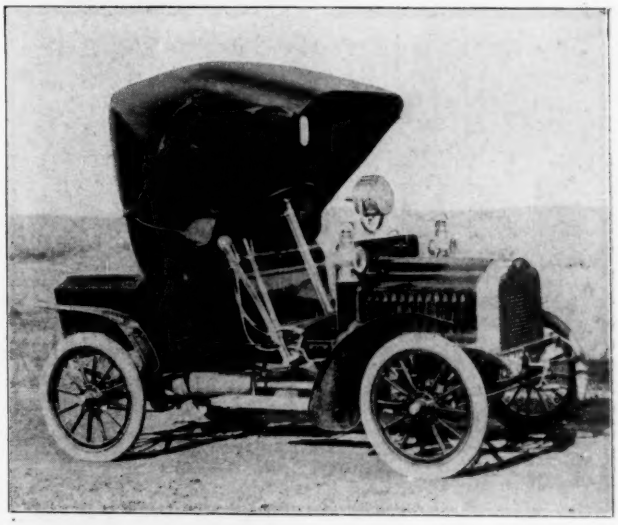


Fig. 9.—With storm apron, this gives protection from weather.

to get back without having to stop and repair a tire makes riding a pleasure.

During the nine months I have used my auto all the time with the exception of about thirty days. The mud of summer has not stopped me, but when we had 18 inches of snow I quit, although in a foot of snow I went along nicely. Again, when after muddy roads the ground was frozen, I had to wait until the roads were smoothed down some.

The only accident I have had of any importance was in breaking my rear axle, but let me add that this occurred when I had pneumatic tires.

Great Pleasure to Oil Up the Machine.

My wife and I took a 300-mile trip last summer and got home without the least accident or break. The gasoline used on this trip was 12 gallons. I keep my machine in my barn and care for it myself, and nothing gives me such pleasure and rest of mind as an hour spent in the morning oiling and looking over the rig.

Tires Are Chief Expense.

Now, as to my expense. My repair bill, which included the new axle, amounted to $25.65. The gasoline expense I do not know, but as one gallon would, on good roads, take me 28 miles, that expense was light. The tire expense is much with pneumatics. My expense for season was $179.33, which included a new set of solid tires, but the solids are nearly

new, and that expense should not all be charged up to one season's expense. My machine is now second-hand in name, but as for as use goes, is good for several seasons. If I had put on a solid tire when machine was purchased, my total expense for running nine months would not have exceeded $60.

PLEASURE AND CONVENIENCE IN CARING FOR ONE'S OWN AUTOMOBILE.

S. S. CROCKETT, M.D.
NASHVILLE, TENN.

PREVIOUS to Aug. 1, 1903, I kept two horses, one carriage and two buggies, at an investment of about $1,300. The fixed monthly livery charge for keeping the horses and vehicles, including shoeing, was $35. The expense for replacing the horses and vehicles and repairs on vehicles is difficult to determine.

Aug. 1, 1903, I sold my horses and bought a four-seated automobile (167) for $850, which I used continuously in my work for two years, going during that time a road distance of 14,000 miles, at a total average monthly cost of about $30. Aug. 1, 1905, I sold my old car and bought a new two-seated one of the same make at a loss of $375.

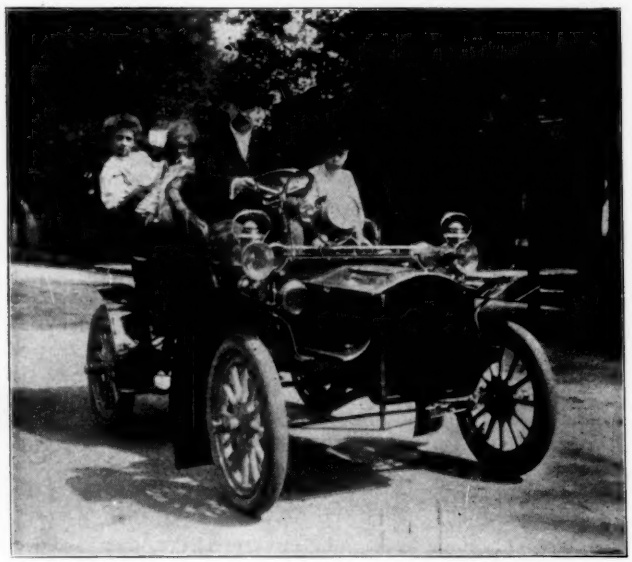


Fig. 10.—A southern physician under very favorable conditions.

My second car has now been on the road continuously since Aug. 1, 1905, and has cost me less than $10 on shop repairs; $45 for new tires; $5 a month for gasoline; $2 a month for lubricating oil; $7.50 a month for housing and washing.

It can be readily seen that if used continuously a car will cost more than one horse and buggy, but less than a pair of horses.

Occasionally Hires a Horse.

I find that in active work it is necessary to hire a horse for a part of a day about once each month because of some small derangement that I have not the time to fix. I find it not only more satisfactory, but entertaining and diverting, to adjust and to oil the car myself. This is usually done at night when I take my car to the barn, and usually consumes about one hour one day in the week and fifteen minutes during each of the other six days. I find it a great satisfaction to spend a few minutes going over the car each night and seeing that it is supplied with water, gasoline and oil, and that the spark plug is clean and in working order. In that way I start out in the morning free from apprehension. I take my car out in the morning by 8 o'clock, and it does not go back to the barn until I finish my work at night. It stands at my door during my office and meal hours, it does not have to be sent to the stable to be fed and requires no time for rest.

Does His Work in Half the Time.

I am able to do my work in about one-half the time I used to consume, and during that time I am absolutely devoid of any sympathy for an overworked and hungry team.

Of course I have troubles; but, as I save half my time, I can put up with that. Any man with average intelligence who applies himself to studying the way the machine should be cared for, can soon learn to remedy ordinary road defects.

Machinery will break, it will get so dirty that it will not work, and it will wear out, and an auto is no exception to the rule. I have been pulled in by another machine only once in the past year—during a travel of about 7,000 miles.

THE MOST SATISFACTORY INVESTMENT FOR THE COUNTRY PHYSICIAN.

HARRY P. ENGLE, M.D.
NEWTON, IOWA.

WHEN I purchased an automobile three years ago I had had no experience with machinery of any kind, knew practically nothing concerning the principles of a gas engine and did not know a float feed carburetor from a commutator or a compression chamber from a planetary gear.

The Sorrows of the Novice.

Soon after signing a check giving me the sole right to own, control and operate this red devil, I proceeded to exhibit my ignorance by filling the gasoline tank with water and found the result extremely disappointing. One drop of aqua pura, in a float feed carburetor, can certainly dampen all the energy in a gas engine, but when I had made a diagnosis of the difficulty, I thanked my guardian angels that I had not come to an untimely end by filling the water tank with gasoline.

The things that I did not know about an automobile were certainly voluminous, but the one thing I did know was that if I ever expected to make the complicated affair go for any length of time I must learn its anatomy as well as I once knew the points of interest on the petrous portion of the temporal bone. And so, after subscribing for a great number of automobile journals, reading every book I could get concerning a gas engine and separating the machine into so many pieces that I would doubt my ability ever to get it together again, I have found that the little difficulties that are sure to arise are easily taken care of and that this purchase has been the most satisfactory one I have ever made.

The Pleasures of the Experienced Autoist.

My three years' experience in a motor car has been with a single-cylinder, 9-horsepower, water-cooled gasoline machine (168). I have taken care of it myself and have had very little experience with repair men; in fact, I do not look on them with much favor. I have averaged over 3,000 miles each year and have found the cost of driving a motor car to be less than keeping a team, and the comfort, convenience and pleasure place the automobile so far ahead that I never expect to own another horse. I have driven the machine at all times of the year, over all kinds of roads, and never have found a hill that caused any trouble in climbing. With the patent chain tire grips for mud and ice, calcium chlorid for zero temperature you can always be sure of getting back home.

After driving the car about six months I sold my horses, but when the roads are very bad I depend on the livery, preferring, as I did when I owned a team, to drive the livery horses over the worst roads. Mrs. Engle is also an automobile enthusiast and handles the car with perfect ease, starting the engine without difficulty, and I feel sure that everything will be all right when she is out driving.

Tires Cause Ninety-five Per Cent. of Trouble.

Ninety-five per cent. of all my trouble has been with the pneumatic tires, using the first year the single tube pneumatic tires, which were an abomination. Now I have the double tube clincher, which gives very much less trouble, but a medical friend tells me that he has completely solved this difficulty by putting the solid rubber on his machine, and I know there is no difference in the way his car rides, and he

informs me that the solid tires do not (as is claimed by the pneumatic people) jar the machine to pieces; they eliminate all tire trouble; so I have concluded to try them when in need of new tires.

Steam Cars Not to Be Seriously Considered.

For country use, over Iowa roads, the steam and electric machines should be mentioned only to be dismissed, and if I should buy another car it would be a gasoline machine, with multiple cylinder, abundant horsepower, larger wheels than the 28x3 I now have and probably solid tires. Recently I have had my car completely overhauled and only two worn parts were found, which were easily replaced at a cost of less than $2. It is as reliable as ever, and I see no reason why it can not be used for many years yet; but, if like the old "one hoss shay," it falls to pieces on the next trip I will feel that, in its three years of reliable service, I have been amply repaid for its purchase price, and, as I said, it is the most satisfactory investment I have ever made.

THE AUTO IN A MUDDY COUNTRY.

E. F. COOKE, M.D.
FORRESTON, TEXAS.

WHEN it rains in a black-waxy-soiled country such as this, the mud is sticky, and when dry the roads are first very rough and then later become splendid until another rain. Last August I purchased a second-hand runabout (137), which had been fitted with a steering wheel instead of the regular tiller. I have had a great deal of trouble, but I still believe in the auto for our use. I put my troubles down as being due to two factors: 1. The greatest was my absolute ignorance of what an automobile really is and errors made in consequence wrought damage to the machine and kept me in hot water. 2. I bought a second-hand machine and had to learn all its weak points at once. It is certainly a most fascinating way of getting around. It saves a good deal of the doctor's time and permits hours of sleep and study that would otherwise be spent on the roads.

Be Your Own Repair Man.

I believe that pneumatic tires are superior to any form of solid or semi-solid tire. One ought to be able and willing to work, as many small repairs are constantly necessary, such as tightening bolts and making other adjustments. These machines will pull through most mud, but sometimes it is necessary to give the driving wheels a grip by using chains or winding a rope around the tire. There is some danger, of course, as a man will travel just as fast as his machine will go and then want to buy a faster machine, but I feel fully as safe in mine as I do behind a horse. No matter what make one buys, it is just as well, if he is in a country practice, for him also to keep a horse.

THE AUTO A SPLENDID FINANCIAL PROPOSITION FOR THE PHYSICIAN.

H. COOPER, M.D.
AMESBURY, MASS.

AS an ordinary country physician for twenty years, I have sometimes owned one horse, sometimes two. The question of the horses eating their heads off was a cause of much study. In the evolution of time the bicycle appeared. I mastered it with the idea of getting rid of one horse. This innovation was an advantage in two ways—personally and financially.

What Horses Cost.

The cheapest method per annum with a horse was $350, which included board and care at a stable, shoeing, taxes, insurance, repairs and the natural depreciation. To add another horse would mean another expense of $250, without considering the depreciation, making a yearly expense of $600 for the one item of transportation from one patient to another. The items of pleasure and recreation do not enter into this computation. All work and no play make a tiresome existence for the physician, and death comes to us altogether too quickly, to say nothing about inviting it by too close application to the ills and woes of our patients.

I have found a way to stave off the Reaper, to enjoy life, to make hard work pleasant and to render every trip to one's patients, by day or night, a real pleasure.

Twenty Thousand Miles on a Bicycle.

When the bicycle came I bought it instead of another horse and made many visits every day on the wheel. It was undignified in the eyes of some, but what matters the ideas of a few if it was a financial saving, and at the same time it gave the physical exercise necessary to excite the liver and bowels into activity, so that those ever troublesome headaches and bad tasting mouth were gone forever.

While I was pedaling over 20,000 miles with much pleasure—to say nothing of improved health and enlarged pocket-book—the automobile was being perfected. In 1902 I sold my team, gave my bicycle away, and bought a runabout (148) of 4½ horsepower. I soon found that I had from three to five more hours each day—for more work or for more recreation.

Fig. 11.—A rolling auto gathers much mud—in Iowa.

Cheap Cost of Maintaining Auto.

I used this faithful little servant eight months, covering 3,000 miles with less than $5 breakage, and at a saving of $250, as compared with a team. The horse hire, electric car fare for the remaining four months' winter service was about $25. In 1903 I used the same car with another 4,000 miles travel and no greater amount of additional cost. In two years I had covered 7,000 miles at a total cost of $175, including breakage, replacements, painting and varnishing, gasoline, lubricant and tire troubles. I then sold the car for 50 per cent. of the first cost.

There had been so much comfort in my work and pleasure at other times that I contracted the touring-car fever. In the spring of 1904 I bought a 16-horsepower touring car (149), and a 5-horsepower runabout (150), the small car for work near at home and the larger car for long and hard trips, or if I wished to take friends for a pleasure ride. I ran the touring car 9,000 miles in the two seasons of 1904 and 1905 with less than $10 breakage. Three of the original tires are still on the car.

In October, last year, I sent it to the repair shop for the first time, that is, after it had covered 9,000 miles of city and country roads. The repairs and replacements cost $197, the retreading of the three original tires cost $30, and $48 was the cost of the new tire. The car is now in first-class condition for another two seasons' use.

An Excellent Financial Showing.

The cost of gasoline, lubricants and batteries for the touring car was about $100 a year. To recapitulate, I have an expense of $550 for four years' experience of using the auto in my practice, whereas the expense of a team for the same period would have been from $1,400 to $2,400, whether I had one or two horses. Getting left on the road never occurred, neither did the auto refuse to move.

CONVENIENCE OF THE AUTO FOR NIGHT WORK.

WILLIAM C. LEARY, M.D.
SPRINGFIELD, MASS.

MY car was bought ten months ago, a runabout (133) costing $1,300, with double opposed horizontal engine, water-cooled, individual clutch transmission, three speeds forward and reverse, throttle and spark lever control, folding front seat and victoria top. During that time I have

Fig. 12.—A Connecticut physician and his faithful steed.

driven it every day through snow or mud over city and country roads and, while it has done the work of two horses, my expense account, accurately kept, shows that the cost has been little greater than the keeping of one horse.

Ten Months at $28.50 a Month.

I figure the cost of each horse at $25 a month—a conservative estimate, since I never paid less than $22, sometimes $24, for board, while the bill for shoeing would easily bring the total up to $25 a month. The cost of driving my car 6,020 miles has been:

Oil and gasoline	$ 62.18
Repairs	40.39
Tires	127.70
Barn rent, washing, etc.	54.75
Total	$285.02

Auto Ready for Night Calls in Three Minutes.

While this cost has averaged but $3.50 a month more than one horse, the great value of the auto lies in the celerity with which regular and emergency calls can be made, thereby saving from two to three hours each day. To the busy practitioner whose time for study or recreation is very limited, this is of inestimable value. At night there is practically no delay, the only preparation necessary consists of lighting the lamps. The livery stables here will not deliver horses after 9 p. m., and often after I had telephoned to have my horse ready it would not be hitched up when I arived there some *fifteen* minutes later. To walk to the barn and return with the auto takes *three* minutes.

His Car Always Brings Him Home.

I rent a barn a short distance from my office and personally see that the oiler is working properly and there is a good supply of gasoline. The tank holds six gallons and the running averages in the city 13½ miles to the gallon; in the surrounding smaller towns, where speed regulations are not so stringent, 18 miles. Each morning I also inspect the motor attachments, springs, steering and running gears and to this I ascribe much of my success. I have never met with an accident, except tire punctures, and my car has always brought me home.

No Dismounting To Crank.

Another feature, my car is started and operated from the seat, thereby insuring as much pleasure driving on muddy streets or stormy days as in pleasant weather.

My idea of a physicians' car is one of at least two cylinders, all parts easily accessible, 15 to 20 horse power, sliding gear transmission, shaft drive, started and operated from the seat.

Pay Enough to Get a Good Car.

I would advise paying a good price in order to get a reliable car. A few hundred dollars may save many vexatious delays and much religion.

After nearly one year's experience with a car I shall never use horses again. If handled carefully, and given proper attention, the auto is the ideal vehicle for a physician.

THE PHYSICIAN AND THE AUTOMOBILE MUTUALLY ADAPTED TO EACH OTHER'S NEEDS.

AMOS AVERY, M.D.
SAPULPA, IND. TER.

I THINK that the automobile is just the vehicle for the physician and that he is just the man for the auto.

A physician is generally a man who has an idea of the natural order of things, what results to expect and how to get results. The every-day training of his powers of observation are such as to help him greatly in caring for and in running an automobile. For these reasons I think that he is just the man for the auto. This is fortunate, for he is the very one who needs transportation on very short notice and in the shortest possible time when hurry calls come in. Time spent on the road is but lost time. Cutting this down one-third or one-half makes it possible for him to do just so much more business.

How to Crank When Crank Is Lost.

I first commenced using an automobile in my practice, in 1904, when I got a light single-cylinder runabout of the buckboard pattern (158). I was then living in eastern Connecticut, where the roads are very hilly, and though the machine was of small horsepower I never failed to make any of the hills in the county. I had the usual run of small accidents, misunderstandings that fill the experience of a beginner. One day an axle broke, but in a few days another was put in its place. At another time I lost my starting crank when 15 miles from home. I managed to get started again by pulling on a small rope that I wound around a pulley that was attached to the protruding end of the engine

shaft. Again, I pushed the car (it weighed only 500 pounds) to the brow of a small hill, and then getting aboard, after sufficient momentum was attained, the clutch was thrown in and the motor started thereby.

I attended to most of the small repairs myself, and in that way I knew daily just the condition of the machine. I ran the buckboard at times all the following winter, and found it worked admirably, for it was air-cooled and there was no danger of freezing any water-cooling apparatus.

In the spring of 1905 I moved to Tulsa, Ind. Ter., and used the little machine there for about six months. Though there was some very warm weather in that place I found that the atmospheric conditions are better out this way for air cooling than they are in the far east, and I had no trouble to keep the motor cool when the mercury was standing at 100 or over.

Arguments for Air-Cooled Motor.

There are two leading arguments in favor of an air-cooled motor: First, it eliminates the danger of freezing in cold weather; second, it cuts out quite a complicated mechanical arrangement, thus simplifying the mechanism and thereby eliminating quite a number of minor troubles that follow.

The town in which I now live Sapulpa, is not suitable for the use of an automobile, for there are no culverts or bridges, and there are so many loose rubble stones.

The Poetry of Motion.

There are a few points of vital importance to be borne in mind if one wishes to run a motor vehicle successfully. When run successfully, it is the pleasantest means of travel for a physician. As an Irishman put it, "it is the very poetry of motion."

Lubrication must be accurately and carefully attended to. If the compression becomes diminished the valves must be ground. More power is lost by lack of attention to this important detail than by any other thing. It is essential to have a mud apron in wet and muddy weather.

I used single tube tires, and was fortunate enough to have very little trouble with them, and the original tires are still on the machine, though I did have a few punctures.

Total Forty-three Dollars for Eighteen Months' Expense.

My bill of expense for running the machine a year and a half was $43, and this included everything: Gasoline, oil, batteries, spark plugs, tire repair, and every other item of running, maintenance and repair, all are included in the above amount of expense. I do not know the exact number of miles traveled, but it goes into the thousands. The more I use an automobile the more I can see the grand future it has for the busy practitioner, in either his business or his pleasure trips.

If the physician chooses to take care of it himself, I would recommend a runabout of two or more cylinders, with an air-cooled, gasoline motor and with 10 or more horsepower. If in a rainy country he certainly would need also a good top and storm apron. Equipped thus he is in a position to do the work that ordinarily would require at least three horses, and at less expense.

AN INSTRUCTIVE NEW HAMPSHIRE NARRATIVE.

WALLIS D. WALKER, MD.
PORTSMOUTH, N. H.

RELIABILITY is the primary quality necessary in a car to be used by a physician. Speed, power, gears and transmissions, although related, are of secondary importance. The doctor's car must be always ready to take him to a patient and back without mishap, at all hours of the day and in any condition of weather and roads.

Between this ideal and the actual car in use to-day there is a gap, and the extent of this gap depends largely on two factors: First, and most important, the personal equation as manifested in the care, use and abuse of a car; second, the judgment shown in the primary selection.

The Auto Needs an Intelligent Owner.

By the personal equation, I mean a man's ability to deal intelligently with the small adjustments necessary to the best working of the highly differentiated mechanism of an automobile, to keep his tank supplied with gasoline, his cylinders with oil and his radiator with water. A man without some love of machinery should leave an automobile alone, for the present at least, until he can afford to hire a mechanic.

The ideal automobile for the physician should combine as many of the following points as possible: A four-cycle engine, of either two or four cylinders, placed forward under a hood; cylinders water cooled; sliding gear transmission, with three speeds forward; shaft drive, geared direct to axle; developing no less than 16 H. P. The combination of these five points, in my experience, makes the most reliable, satisfactory and economical car.

The Engine.—The future must decide between the relative merits of the four-cycle and the two-cycle engine. At the present stage of motor development, the four-cycle has outstripped the two-cycle in general use. A single-cylinder motor is not sufficiently powerful, and the vibration is objectionable. Two cylinders of sufficient size will develop ample power, and if opposed and properly balanced, will produce a smoothly running engine. A four-cylinder motor has little advantage over a good double opposed, and must be more bothersome. The engine must be accessible for inspection, cleaning and adjustment. Engines hung under the body do not fulfill this requirement.

Fig. 13.—Comfort and convenience in New England.

Chooses Water-Cooled Motor.

Cooling.—Although cylinders can be successfully cooled by air, and although the absence of water during cold weather is a convenience, I choose a water-cooled motor, partly because of the deleterious effect of the high temperature of air-cooled cylinders on the exhaust valves and spark plug, and partly because I believe that the evener temperature of the water-cooled cylinder gives better efficiency. Two parts of wood alcohol to three of water will not freeze in the ordinary New England winter.

Transmission.—I have had no experience with friction drives. For runabouts of a thousand pounds' weight, and not over 10 horsepower, the planetary type is satisfactory, but for the heavier and the higher powered cars, I consider the sliding gear transmission essential. The friction bands of the planetary drums wear continually, and must be adjusted, and few transmissions of this type provide for more than two speeds forward. Sliding gears wear little and are absolutely positive. Three speeds forward is the rule on most well-built models.

The Drive.—Chains can not be kept clean or well oiled. Chains have not yet been made that will not stretch and require adjustment. So I prefer the shaft-driven car. Moreover, cars driven by single chains usually have the engines hung under the body, which is objectionable.

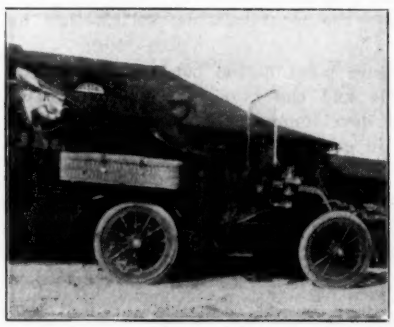


Fig. 14.—The touring car used by a physician in Evanston, Ill.

Power. — For the city physician, with good roads and no bad hills, 10 horsepower would perhaps be sufficient, but for country roads, up hill and down dale, in slush, mud, and sand, there is no hope for satisfaction in anything less than 16 horsepower. It is very trying, when in a hurry, to worry through a stretch of sand or mud on low gear for want of sufficient power to keep on the high, and I have heard many men denounce their cars as unsatisfactory merely because of the failure of an 8-horsepower engine to do the work of 16 or 20 horsepower.

Factors to Remember in Comparisons with Horses

Expense.—There have been many comparisons drawn between the horse and the car as to practicability, reliability, expense and what not. Unless the factors entering into such a comparison be equal, no just conclusion can be drawn. One man feeds his own horse, curries him, beds him down. Perhaps he raises enough hay back of the house to keep him half a year. Another man hired a coachman to do these things. The cost to the first man is infinitely less than to the second, though, perhaps, the horses do equal work. It is the same with a motor car. The actual cost of gasoline and oil can be kept as low as a cent and a half a mile, but it is the repairs, due to careless handling, the garage charges, the outside labor spent on adjustments, that bring up the running expenses. Taking into consideration the first cost of a good car and the rapid decrease in sale value, a man will spend more actual cash on an automobile than on a horse. Leaving out the original investment for the moment, I doubt if the running expenses of a car, driven by a competent person, will exceed the expenses of a horse-drawn vehicle, while the mileage will be vastly in favor of the machine.

When I have used a horse, I have hired one at $11 a week, everything included. The monthly expense of maintenance of my auto (163), including care, repairs, gasoline, oil and acetylene gas for searchlight, is approximately as follows:

Gasoline, 30 gals., at 20c	$6.00
Oil and grease	1.30
Repairs and replacements	3.00
Total	$10.30

Care of the machine is not included in this. If one keeps the car in his own stable this item is practically nil. If the car is boarded at a garage the price will vary from $8 to $15 a month.

Delays Are Few.

Reliability.—I have come to consider the chance of serious delay with my runabout as no more than equal to the chance of delay on a well-managed electric road. From February 26 to December 31, last year, I was not delayed ten minutes at any one time, and that with a total mileage of over 4,000. I was, however, exceptionally free from tire troubles, experiencing only one puncture. I attribute my freedom from delay largely to the fact that I made a point of knowing that the car was always in the best of running order before taking it out. A man must know his car thoroughly and must treat it, not as an automatic contrivance that needs only to be run, but as a complicated and delicately adjusted piece of machinery that requires constant care and attention.

There is no doubt that the automobile is a practical conveyance at all times and under all conditions, except in the deepest snow. During the winter of 1903-1904 my car was laid up about six weeks. In 1904-1905, one month at a stretch, I could not conveniently use the machine. During this last winter, there have been only two weeks when I could not run, though this present heavy snow will keep the car housed for ten days more besides. At all other times my machine has been ready and able to do my work.

THE AUTOMOBILE SOLVES THE TRANSPORTATION PROBLEM.

W. H. CURTIS, M.D.
WILMINGTON, ILL.

WITH a year's experience, I should say that under ordinary conditions the automobile is not only practicable, but eminently satisfactory for country use for approximately ten months in the year, while for city usage it is "always in season." Its utility depends now not so much on structural defects in the machine itself, which have been largely eliminated, but mainly on the condition of the road.

No Machine Made Will Go Well in Bad Roads.

In my opinion, no power machine yet invented or to be invented can by any possibility make transportation an unalloyed pleasure over our badly constructed and illy cared for country turnpikes at certain seasons of the year. While machines of the type I use will go wherever a horse can and sometimes where they can not, it must be at the expense of an amount of power by both machine and driver that inclines the balance in favor of the horse-drawn vehicle. In my locality, however, these conditions are ordinarily of but limited duration.

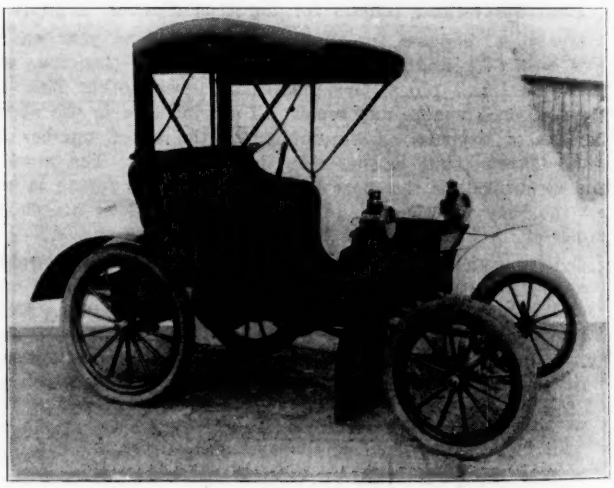


Fig. 15.—A New York doctor's handy conveyance.

Given ordinary dirt or gravel roads, one's time spent on the road is cut down one-half or three-fourths, which increases one's earning capacity to an equal extent, while at the same time one's physical discomforts are reduced to a minimum—for I consider my machine the easiest riding vehicle I was ever in.

The machine I use (135) has wheels 44 and 48 inches in diameter, respectively, with solid rubber tires, and differs in no important particular from the ordinary carriage wheel, which is the evolution of many years of experiment. Power is

supplied by a double opposed air-cooled engine, developing 10 horsepower, which is transmitted to the wheels by means of wire and hemp cables, thus doing away with unreliable and breakable transmission gears and greatly simplifying mechanism. It is effectively and easily controlled by two simple hand levers, which permit of no confusion and consequent mistakes. It will run 30 miles an hour; I ordinarily drive it at from 15 to 20, which is rapid enough for me.

Runs Up Hill Like a Scared Rabbit.

It will run up hill like a scared rabbit—and, in short do anything demanded of it except talk Russian. I care for my own machine and find it a very small burden, rather pleasurable than otherwise; for this reason I think I can say my machine, after a year's hard work, is now in better shape than when it came from the shop, for it has now "found itself"—a term any sailor or mechanic will understand.

Any new beginner will have troubles; mine have been slight and mostly of my own making and not the fault of the machine. I think my auto leaves very little to be desired as a means of transportation for the physician.

My machine cost $650. Monthly expenses have been nil, with the exception of cost of gasoline—about $4 a month. The only repairs I have had to purchase was a broken change gear (of a weak and obsolete pattern not now used), $15. My expenses for maintenance of a span of horses has for many years averaged me $650.

GREATER ECONOMY AND BETTER SERVICE WITH THE AUTO.

A. C. MAGILL, M.D.
PITTSBURG, PA.

MY first car (159) was bought six years ago, and I believe that I was one of the first physicians in America to adopt the automobile exclusively in making professional calls. In this 5-horsepower car I traveled 16,000 miles, mostly over the worst roads in western Pennsylvania. My expense was somewhat less than half what a horse-drawn vehicle would have cost for the same mileage, as I

Fig. 16.—Ten horse and one dog power.

found it a simple matter to keep my car at my own garage. With a little care in operating it the adjustments were very few, and I could take care of them myself. It was very seldom that I did not have the car in daily service.

After using this car for three years I decided to purchase a later model of 8 horsepower, with a low-compression, high-speeded motor, which I believe is the most serviceable and economical. This car (160) I am using at present, and have had two years' service out of it, having in that time traveled 14,000 miles; and it is in condition at present to travel as many more.

From my experience with automobiles I am perfectly satisfied that they are more economical and give better service than the horse-drawn vehicle for physicians' use.

THE PHYSICIAN WHO SHOULD NOT PURCHASE AN AUTO.

W. W. BEVERIDGE, M.D.
ASBURY PARK, N. J.

FOR the last four years I have been using machines in my practice with very good success. Except in the winter months, I have practically abandoned the use of horses for both business and pleasure.

The Careless Physician Can Not Run An Auto.

I am convinced that the utility of the auto for physicians depends almost entirely on the skill of the man who operates the machine. Did you ever meet a physician whose instruments were always out of order when he wanted to use them, whose books were always loaned when he needed them, and whose general equipment was always out of use? If you chance to meet him, advise him not to try the automobile in his practice. Such a man will always have trouble. I believe the unsuccessful owners of machines among physicians are largely of this class. For the successful and economical operation of machines great skill is necessary. Almost all accidents and annoyances on the road are due entirely to negligence, ignorance or bad management on the part of the operator.

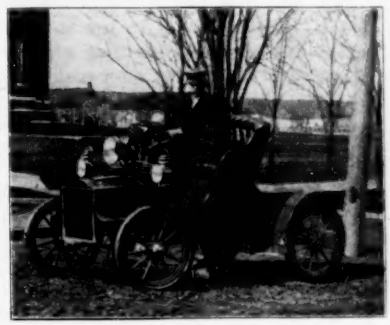


Fig. 17.—An automobile used in the southwest.

Begin with a Simple Machine.

The choice of the machine, to my mind, is a matter of secondary importance. Any good machine will do good work, and, I believe, will be very satisfactory in the hands of a skillful man. While passing this part of the subject, however, I would say in a general way that in point of economy, the lower powered cars will give more satisfaction, less trouble and are the cars that all beginners should use at first. But, of course, in a hilly country, or where the roads are heavy only a very powerful machine will do at all. It is also a great advantage to have a machine that is made near home, as new parts can be obtained more quickly, and at far less expense. Compound engines are never easily mastered by one who is not familiar with the single-cylinder engine.

Auto the Most Useful Thing in Doctor's Whole Equipment.

In putting so much emphasis on the skill of the owner in operating his machine, I do not wish to be understood to speak disparagingly to the prospective purchaser, for requisite knowledge to run a machine successfully can easily be acquired, and is really one of the easiest attainments that the physician can reach. Remember, that it took you three or four years to become a doctor, and at that time your trouble just began. What seemed very difficult or impossible to do at that time is perhaps very easy for you now. So do not imagine you are a chauffeur the first few months you own and operate a machine. Perhaps years of experience have made the art of healing easy for you; so, too, months of experience will make you proficient in handling what should be the most useful thing in your entire equipment.

Success Depends on the Operator.

When we read of some skillful operation performed by some noted surgeon, we do not stop to inquire what kind of knife was used or who the manufacturer of it was. The chances are that the surgeon himself did not know who made the instruments; and possibly they were not of his selection. The same implements in the hands of the unskillful would fall in ill-repute, and the surgical triumph would not be achieved I believe that if these facts are always borne in mind, the physician will always speak a good word for the automobile.

I have used a steam car (146) and three runabouts (147), mostly for business. Last year I think it cost me about $50 for gasoline and oil; for repairs and new parts perhaps $40. I use my machine for pleasure and side trips as well as for business, and the expenses of these trips are perhaps more than the actual cost of the machines while at work.

I feel like recommending here a certain heavy oil (156), a crude petroleum, which, when filtered through a felt hat, is the best lubricating oil that I ever used. I gave it a severe test and know its value. The chief point of interest is that it costs $5 a barrel instead of 75 cents a gallon. It is a light oil, although it is called heavy. I buy it from the producer and find it a great saving, for at that price one can use oil freely, and that is the life of the machine. I keep my horses and machine together in the same stable, and the same man cares for and drives both, so another item of expense is combined. My stable and man cost perhaps $1,200 a year.

I would be glad to write further to any one specially interested if I can be of any service to them.

PRESENT LIMITATIONS AND FUTURE POSSIBILITIES.

DEFOREST LAMBERT, M.D.
SALEM, MASS.

SEVERAL years' use of the motor car in all kinds of weather, both summer and winter, have convinced me of certain definite points in regard to its present limitations and future possibilities as a physician's utility vehicle.

Experience with both types has convinced me that for physicians' use the air-cooled engine possesses such great advan-

Fig. 18.—An auto that looks much like a buggy.

tages over one cooled by water that the latter need not be considered, any more than steam, for all-the-year-round service.

Motor Should be Accessible.

For reasons of accessibility, single and double-cylinder engines hung in or under the car body should be discarded in favor of the vertical multi-cylinder type placed in front under a hood. Chain drive, single or double, is noisy, expensive to maintain and dirty, and should give way to enclosed shaft drive through bevel gear to a live rear axle of floating type.

The differential is probably not necessary in its present form, and as many accidents occur which may justly be attributed to its action on slippery roads, a more positive drive is desirable. Such result may be secured by the employment of a screw and friction device at each rear wheel.

For smoothness of action, power and economy a two-stroke engine is far superior to the four-stroke type so commonly used at present, and as soon as the manufacturers sit up and take notice it will become the prevailing style for service cars.

The proportion of engine power to vehicle weight is all important and should be about one-horse power for each fifty pounds. This will allow the change speed gear to be dispensed with if a proper clutch is used which may be slipped for starting and when necessary on hills. The usual means of starting the engine by crank should be displaced or at least supplemented by a mechanism operated from the seat.

Details Desirable in the Ideal Car.

The wheels used at present are much too small and should be at least three feet in diameter; they should be of the pressed-steel double-disc type, and shod with solid rubber tires, for pneumatic tires are worse than useless on a business vehicle intended to replace a horse.

Experience shows that a physician's car should weigh about 1,000 pounds, and have a four-cylinder, two-stroke, air-cooled vertical motor under hood in front, metal-to-metal clutch

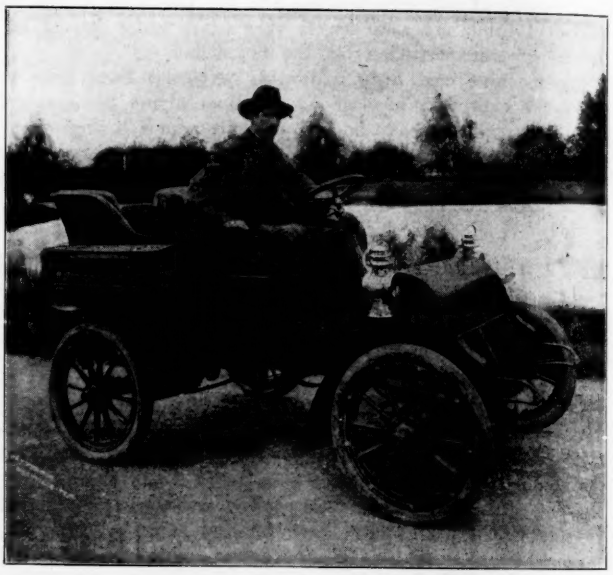


Fig. 19.—Room for company in this doctor's car.

running in oil, direct-shaft drive, bevel gear, and floating rear axle with wheels driven by differentially acting friction clutches. All mechanism must be completely protected from mud. No brakes should be located on transmission members, but all braking effect should occur at rear hubs. Large steel disc wheels are best, and they should be equipped with solid rubber tires. The body should be metal and no wood or other combustible material used in the construction of the car, which should be finished in aluminum paint from hood to muffler. Such a machine will soon be on the market.

The machines which I have been using during the past few years do not correspond to the above description, but they have shown me in what direction improvements are needed. With all its faults, I like my present car (151) much better than horses in my practice, and find it less expensive to maintain than enough horses to do the same work.

THE AUTOMOBILE FOR PREVENTION OF CRUELTY TO HORSES.

H. B. KENDALL, M.D.
MENASHA, WIS.

SINCE March 28, 1904, I have operated an automobile over 6,000 miles on all kinds of roads, fair, bad and worse, in a circuit of thirty miles, and have been hauled home but once (a broken axle arm).

Before buying the automobile I was obliged to keep two or three horses; now I keep none, although for one or two months in the winter a horse is often a necessity; yet a road that is fit for a horse is fit for an automobile. The greatest benefit

to the public roads would result from the establishment of a like width of track for winter and summer.

I am a great lover of the horse, and it was this, more than anything else, that caused me to consider the automobile. The miserable condition of city streets and country roads for from five to six months of the year made it actually cruel and inhuman to drive the animals, even under the kindest guidance; and the often unavoidable exposures to cold, storms and flies which the faithful beast was compelled to endure gave me automobile fever and I haven't got over it yet.

Dives Into a Snowbank.

With the instructions sent by the company I alone, set up, started and operated my machine. The first thirty rods we drove, the pesky thing made a bee-line for a three-foot snowbank at a fifteen-mile clip and plunged in. The guiding lever failed to act because the gray matter in the driver's cranium

Fig. 20.—This physician has run this car 55,000 miles.

failed to direct the hand that controlled it. Of course the automobile was to blame for this. No harm was done, no horse needed; we pulled it out alone, swung to starboard, and were off—a little wiser. My experiences and observations have convinced me that carelessness, incompetency and lack of mechanical skill are a trio of factors that go far to cause biased and prejudiced feelings toward the automobile.

My car (162) has gasoline motor, two opposed cylinders; cooling positive on both high and low gear, whether vehicle is in motion or not, by a large special fan flywheel. The motor being mounted horizontally, the vehicle runs without any vibration that can be felt by the occupant. Get the highest horse power motor possible to apply to your automobile.

The Auto Will Not Run Without Being Cared For.

My car is kept in an ordinary old barn. It has the same wheels, in perfect condition, same body, paint and trimmings, and same tires (solid rubber) that were on when I received it. I care for and operate it myself; and now we are so well acquainted that I know better than to blame the commutator or brushes or spark plugs for every degree of failure of the motor to act properly; nor do I find fault with the carburetor, or some of the internal mechanism of the motor for such effects when a bank of weak batteries, an empty gasoline tank, or poor lubrication is the cause. Treat the automobile with the same consideration with which a good horseman treats his horse and it will serve you well.

My actual expenses with the automobile are rather less than keeping a good horse, with necessary paraphernalia, if I cared for it myself. A horse wears continually whether he works or not, and the expenses are about the same. Practically, an automobile costs nothing when not in use; it can only get out of style and behind in improvements, which are brought out every few months. In fact, most of the expense to my car is the result of this very thing, the addition of improved devices. Old will do, but up-to-date is better.

My car is either one or two-seated, and, as no dust wraps are needed in summer, the pleasure we get out of country rides and trips to neighboring towns more than compensates for its care.

Relative Cost of Keeping a Horse and an Automobile.

HORSE AND RIGS.		AUTOMOBILE.	
RELATIVE FIRST COST OF EQUIPMENT.			
Two horses	$400	Automobile	$700.00
Buggy, rubber tire	100	Fur robe	20.00
Cutter	50	Heavy lap robe	8.00
Cart	25	Summer robe	2.00
Two sets harness	40		
Two day blankets	20		
Two night blankets	10		
One fur robe	20		
One heavy lap robe	8		
One summer lap robe	2		
SUPPLIES FOR ONE YEAR.			
Oats, 390 bushels, at 30c.	$117	Gasoline, 120 gals., at 18c.	21.60
Hay, 2 tons	28	Lubricating oil	4.20
Straw, 6 tons	30	Spark plugs	6.00
Farrier services	75	Inlet valves	4.00
REPAIRS AND HIRED MAN.			
Repairs (ordinary)	40	Repairs (average circumstances	50.00
Man	100	Man	25.00
Total	$1.065	Total	$840.80
No. of months' service, 11		No. of months' service, 10.	

These estimations are calculated on a basis of two years' service.

Time saved in making trips, 40 per cent.

I will give details of operation, etc., to anybody on demand.

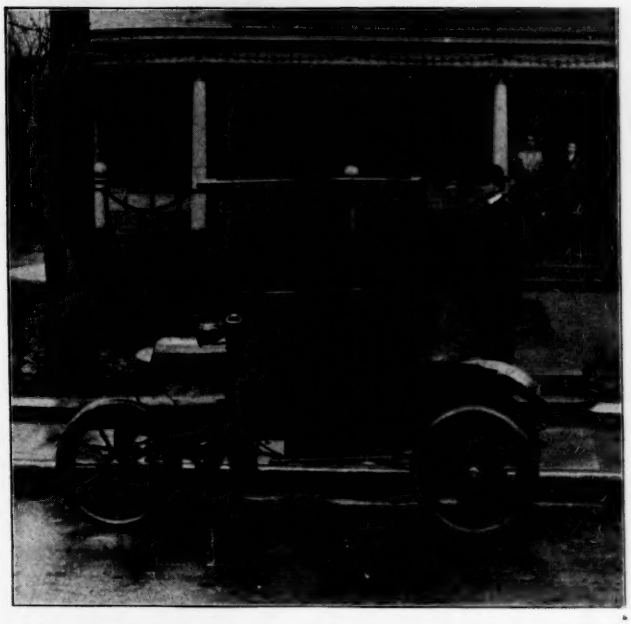


Fig. 21.—A very comfortable appearing vehicle.

THE AUTO IN COUNTRY PRACTICE.

F. E. DAIGNEAU, M.D.
AUSTIN, MINN.

FEELING that I was wasting too much time on the road when making calls in the country, I decided in 1903 to dispense with livery hire and to invest in an automobile. Accordingly I bought a single cylinder runabout of a popular type (175), with governor timed ignition and gravity circulation. This car I used with fair success for two years, but found that when the roads were heavy, in spring and autumn, I did not have sufficient power. I then began an investigation of the different cars on the market for a doctor's use. The car (176) I finally purchased as most fully meeting my requirements was a three cylinder 15 H. P., 1,250 pound machine with large wheels, giving high clearance, and equipped with low tension magneto make and break ignition which practically eliminates all ignition troubles. The simplicity and accessibility of the mechanism leaves nothing to be desired.

This machine has done away with previous difficulties and as I take care of it and make all small repairs myself the expense of upkeep is comparatively light.

The Auto a Problem in Winter.

For eight months of the year I can use it in my work, but in winter I have to go back to livery hire. While the city physician can run his car nearly every day in the year the country doctor will find that winter use is not practical. Unless the car is kept in a warm place it is almost impossible to start the engine on account of the thickening of the lubricating oil. A light fall of snow does not prevent the running of a car, but snow does not remain spread out and the car is not made that will go through large snow drifts.

The automobile is certainly a practical vehicle for a city practitioner, and it has many advantages for the country doctor. Barring accidents, it is always ready, day or night; much less time is spent on the road than with horses and the doctor has more time for office work, study, or social duties. Also the auto is a delightful form of recreation.

Tires form the biggest item of expense in running an auto, but one should bear in mind that the wear and tear on these is greatly diminished by large wheels and a light car. I advise any physician who contemplates buying a car to get one with plenty of power and of light weight. Then let him acquire a thorough knowledge of its mechanism and be able to make small repairs on it himself if he would operate it successfully and economically.

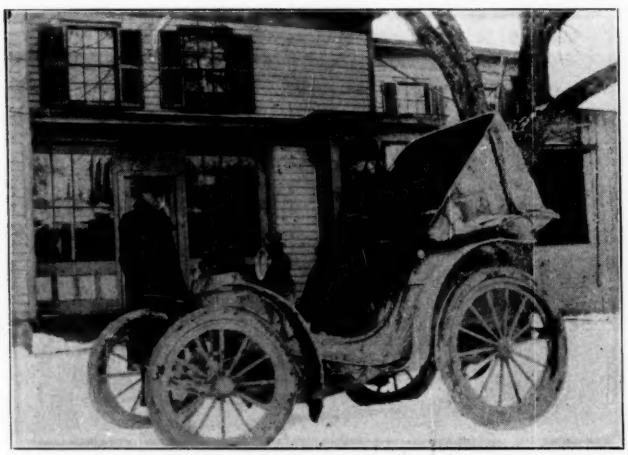


Fig. 22.—A New England physician whose car is not hindered by any ordinary amount of snow.

A CONCISE ENDORSEMENT OF THE AUTO.

M. CLAYTON THRUSH, M.D.
PHILADELPHIA.

DURING the last two years I have used an automobile constantly in my practice. My car (177) is an 8¼ H. P. machine, run by gasoline, has single cylinder, water cooled, and has two seats. The complete cost of car was $830. I store the car on my premises.

The cost of maintenance has been carefully recorded, with the following result: Gasoline, oil, and dry cells average about $2.50 each month; repairs of all kinds average $3.00 each month. One set of tires lasts a season; the tires cost $35 each.

Economy and Satisfaction.

My car covers about twenty miles daily in Philadelphia and suburbs, is now being used for the third season, and gives as good service as the day it was purchased. The total time out of service for repairs of all kinds would not average twenty-four hours in a month. I drive my car myself and obviate expense of chauffeur. It requires about fifteen minutes daily to keep car in running order. Under above conditions the total expense averages about $18 each month. A horse and carriage would be more expensive to maintain with the same amount of time expended, and one cannot travel nearly as rapidly.

THE BUSY PHYSICIAN SHOULD STICK TO THE HORSE.

W. C. CLARKE, M.D.
CAIRO, ILL.

ORIGINAL cost of any new machine that will stand wear and service must figure at least $1,000. To keep in garage will cost from $10 to $30 each month. This includes repair work of all kinds, but new parts, if broken, cost extra. In my experience this item has been extremely small. Gasoline at the least costs $6 each month and oil $2. Our garage man keeps machines cleaned, oiled and fed, delivered at my door when called for.

My runabout cost me $800 without horn, lights, hood, covers, etc. My searchlight, bull's-eye lights, side lights, horn and Gabriel horns, clock, speed meter and top cost about $400 extra. The entire cost of maintenance, including expense for repair, gasoline and oil, has not exceeded an average of $25 a month. The expense of horse and buggy keep will average $20 a month. One will buy a new horse each year and a new buggy every two years.

Immense Saving of Time.

An automobile has the advantage of 75 per cent. when weather and machine permit. You do not have to untie or hitch, harness or unharness, and with a good machine you can go where horses can go. In making night calls it is at its best, for here you can save fully 95 per cent. of time. A point always to be considered is that in cold weather the auto must be kept in a warm place or you can not crank the machine.

A Plaything for Grown-up Boys.

Horse and buggy can not be mentioned in the same day with an auto for genuine pleasure, health and excitement. For the overworked doctor it is better than medicine, vacation or religion. It makes one forget he is living, or that he must some day die. It makes him feel that if he must die the auto route is the best. In fact, it is the only pleasure greater than our boyhood days of brass-toed boots and circus parades.

A Poor Business Proposition.

For a busy doctor who wants to know the truth of the automobile compared to a horse as a business proposition, I can say that the auto is not to be considered. You can not get along without a horse and buggy, winter or summer. At least, this is the experience of myself and two colleagues (154, 155) and we all own good machines.

In conclusion, I think automobiles belong to the class who have plenty of time for pleasure, who are willing to pay for it, and who know that they get the only real pleasure money can buy. The doctor who is busy and who is making money had better stick to the horse and buggy until his boys have graduated as machinists.

ESSENTIAL POINTS IN AN AUTOMOBILE FOR COUNTRY USE.

H. W. CHAPMAN, M.D.
WHITE HALL, ILL.

FOR the past two years I have been using an automobile in my work during the summer, when the roads are at their best. My machine (161) has many good points which I deem essential for economical use on country roads.

In the first place, it looks like a road wagon and, in consequence, is an object of less terror to horses than an automobile of the usual pattern. The wheels are 44 and 48 inches in diameter, with solid rubber tires. Two horizontal air-cooled cylinders of 6 H. P. are hung close to level of axles, which together with the wheels constitute about all the weight of the machine.

Complaints About the Makers.

This machine clears the road more than any other and has a speed of 20 miles an hour. There is no differential, and the transmission is exceedingly simple in construction; these things make it durable and economical as to power, but render

the driver's work a little more complicated. These wheels stir up almost no dust, and for good roads the machine is a success and reliable since I have worked it over; as it came from the factory, however, because of careless construction and adjustment, it caused great trouble and expense during the first season.

The legitimate expenses for repairs for the two seasons have been less than that of keeping one horse shod. Fuel and oils amount to less than the feed of one horse, as the machine only eats while working. The time consumed on the road is just one-half that required by a horse. For pavements and hard roads the machine would be all right every day in the year, but for country roads it has insufficient power if there is any mud, or if the steep hills are not smooth.

This machine is for two passengers, and had it been provided with a 15 H. P. motor it would probably be able to propel itself on steel tires which should be provided with self-sharpening calks that would hold on ice and greasy roads. With a wheel of this size a man should be able to ride 20 miles an hour on a steel tire, which is all the speed any machine should have for use on public roads.

Expects Little Improvement Until Market Relaxes.

If one can eliminate the pneumatic tire, the water-cool, the differential gear and the complicated transmission and have an honestly made engine of sufficient power at a price within reach of men of moderate means, our farmers and business men would soon have them and the prejudice against their use on the roads would rapidly disappear, provided the drivers had succeeded in reducing the golden rule to every-day practice. Up to the present, however, prospective purchasers do not know what requirements are essential, but trust the manufacturer, who is usually in the same position, but chiefly interested in converting his machine into cash. So long as the supply of inexperienced purchasers holds out there is but little inducement for the manufacturer to alter his models.

THE AUTO ADVANTAGEOUS IF UNDERSTOOD AND WELL CARED FOR.

PHILIP SCHUYLER DOANE, M.D.
CHICAGO.

FROM my own experience and that of my friends I have drawn a few comparisons between runabouts and the single horse and doctor's buggy. The original expense or outlay for the automobile is little greater. The cost of maintenance is, if anything, a little less—when the car is run carefully and intelligently. I feel confident that the experimental stage of the automobile is over and that the gasoline or steam machine has become a practical thing—almost a necessity to the busy doctor of the present day. In large cities and in the country, physicians doing general work must cover considerable territory. It must be done with the least possible loss of time—day or night. The well-constructed type of runabout will meet these demands as a horse or horses can not.

Pay Enough to Get a Good Car.

Great mistakes are made in the original purchase of an inferior machine which sells cheaper than the standard makes. The cheap car usually runs well for a few months, but then troubles commence and expenses multiply for repairs and new parts; and there is great loss of time and wear and tear on one's nervous system.

Learn Your Car and Care for It Yourself.

The knowledge of mechanics is desirable, but not necessary in the management and running of an automobile. Every physician is more or less a "natural-born" mechanic, and it does not take him long to form a very close acquaintance with and a warm friendship for his machine. He will soon know its very pulsebeat and be able to diagnose any difficulty that may exist in any of its vital organs. This intimate friendship is of the greatest importance if one would get the best results at the minimum cost.

Keep your machine in your own barn or rainproof shed. The average keeper of a garage has an idea that the automobile owner has a bottomless pocket. For the first six months that I owned my car (157), I kept it in a garage and the monthly expense, for washing and cleaning and delivering it to me daily, was $20. This is exclusive of gasoline, batteries, etc., of course.

With Experience One Can Save Much Expense.

I then moved out to our summer home and kept the car in our own barn. Our gardener washed and cleaned it and I looked after the machinery. This method brought the expense down to a minimum. I purchased a 60-gallon tank and bought gasoline at wholesale rates on account of the quantity.

The amount of gasoline consumed is governed by how much the car is run—the beginner always using up more oil than the expert for the same amount of mileage.

If you take care of your own car, very little time need be spent on it, if you look after the details carefully before you start out for the day. It is necessary that you have someone to wash and clean it for you, and this same individual can be taught to keep the tanks filled with gasoline, oil, water, etc. A few hours each week will suffice to go over the engine, clean it carefully, and tighten the bolts and screws.

Tire difficulties are the bane of an automobile owner's life. For that reason I think that the car that is well constructed but not too heavy is the car a physician should look for. The air-cooled machine, as it stands to-day, has no advantages over the water cooled; whereas, the latter has the advantage of not getting overheated in summer—that time of the year when the automobile is the greatest pleasure to you and your family.

Fig. 23.—The runabout of a country practitioner in the northwest.

I have a water-cooled car, and have secured a 1906 pattern of my original purchase, and hope to continue to enjoy it and to prosper in my professional work, with my runabout to hurry me about in this large city and its many outlying suburbs.

FROM THE STANDPOINT OF THE LARGE MACHINE.

JOSEPH A. ROBERTSON, M.D.
NEW YORK.

ALTHOUGH my greatest trouble has been with the tires, it has not been from punctures but from rims cutting through the sides of the outer tire, resulting in "blow-outs." The support being removed, the presure is thrown entirely on the inner tube, causing it to rupture with great noise like the report of a pistol. I have had this happen with new tires. These occurrences take up a great deal of time. The causes of this rim cutting are, mainly, three: 1, poorly constructed tires; 2, improperly fitting tires to the rims; 3, fast motoring. Manufacturers have given this subject very careful study during the past year, and now claim to have obviated this troublesome problem. Being in this quandary I replaced the American rims and tires (171) by French rims and large tires (172) supplied by a leading French tire manufacturer. Since changing the tires I have had no such troubles as in the past.

Motoring as a Health Giver.

I can heartily recommend motoring as a health-giver. It keeps you out in the fresh air and sunshine. The constant

vibration, changing panorama, etc., are conducive to building up firm foundation for a long life. I believe a great many overdo this pleasure-giving recreation. People who find it to be a tremendous nervous strain to drive their own cars should not continue, as nerve exhaustion soon follows. I have seen several persons whose nervous systems have suffered from driving their own cars, causing insomnia, loss of weight, etc.

Protect the Eyes with Goggles.

The traumatism of the conjunctiva in motoring is very severe and one should always wear goggles. Particles of dust and dirt are constantly getting into the eyes, even with goggles on, and I advise to have constantly on hand some 1 per cent. solution of cocain and a saturated solution of boric acid. I also prescribe after a long motor run to douche the nose and throat with some mild antiseptic, thus obviating any infection which might be in the dust which has accumulated in the nostrils, nose and throat.

It is of great importance for one to understand very thoroughly the individual car one is driving. Learn the carburetor construction piecemeal, as this can be called the heart of the gasoline engine.

Important Construction Details in Large Cars.

Lubrication ought to be from the dash-board to the principal bearings. This system should be mechanically operated. The splash system should be used in the engine case and gear case.

Fig. 24.—Ready for the day's professional calls.

The multiple metal disc clutch and internal expanding clutch are the two best types. I give the preference to the internal expanding type as this obviates any thrust on the engine shaft and bearings.

The large Hess-Bright type of ball bearings for a car has given the best results. These bearings are being used by the leading automobile manufacturers in the engine bearings, wheel bearings, gear case bearings and transmission throughout. Flexible joints between clutch and transmission are used for alignment. The universal joint is commonly used.

In an automobile greater than 24 H.-P. the wheels of such a car should be very strong. Many accidents have been called to my notice by the breaking of a front wheel from skidding or turning sharp curves. I know of one case where the front wheel broke on an automobile that was going at a speed of 30 miles an hour, and the car was thrown over as a result, causing serious injury to several of the occupants. The frame should be of a strong steel. For all around usage I would recommend a 24 to 35 H.-P. automobile, water cooled, mechanically operated inlet and exhaust valves, with carburetor of the cool air type. For the axles, shafts, gears and wherever strains are heavy nickel steel should be used. Springs ought to be long, large and strong. This will eradicate using any shock absorbers, which are not necessary if springs are properly constructed. The suspension of the car frame in the rear should be of the three point spring type. Piston rings four to five in number give the best results. The chassis should have at least 110 inch wheel base. Some modern cars have a wheel base of 120 inches. The longer the wheel base the easier the car rides.

On average roads I would advise the chain drive. For a very sandy region where there are also pebbles the bevel direct drive is the best as many chains are broken by pebbles getting in them. This kind of drive, however, has not been successful on the very high powered cars. The gears of the shifting selective locking type are the most modern and must be considered before any others.

Carry Outfit for All Emergencies.

For all motorists I recommend a full set of tools, extra inner tubes, shoes, tire pump, chains, tire chains, repair tire outfit, fire extinguishers and plenty of lamps for night driving. The supply of gasoline to the motor is best accomplished by the pressure system, using compressed air and the exhaust pressure in the gasoline tank. The Limousine body is the most adequate for a physician's use.

Cost of Keeping Large Cars in New York City.

I have driven a 16 to 22 H.-P. 4-cylinder, double chain driven gasoline touring car (173) nearly 19,000 miles unaccompanied by a chauffeur, mostly in New York and vicinity, over good roads. The longest run I took was to Lake George via Saratoga and return. All kinds of roads and grades on this run were encountered.

The accommodations for a machine in New York are very fine, and my machine was kept at one of the garages. I did all of the minor repair work on the car. The heavy repair work, which involved more time than I could give to it, was done by the repair shop at the garage.

It is more expensive to purchase and to keep up an automobile than a horse. The cost of maintaining an automobile in New York City, along the lines I mention, is, in round numbers, $60 a month. This includes storage, which amounts to $25. If one has a chauffeur, the expense would amount to $125 a month. If one has his own stable, this large storage bill would be eliminated.

The cost of an American automobile of the horsepower I advise is from $3,000 to $5,000. With such a machine you can figure on one gallon taking you from 12 to 18 miles.

I have called attention to modern ideas about the larger cars instead of relating my minor mishaps and experiences. These general ideas have arisen from experiences and observations I have had and made with automobiles of all kinds (174). "Experience is the best teacher."

Weighing the time of going from one place to another, where distances are great, the automobile should be given the preference. In a very hilly country the wear and tear on an automobile is very great, and I would recommend the use of a horse in preference.

THE AUTO INVALUABLE IN GENERAL PRACTICE.

A. C. KIMBERLIN, M.D.
INDIANAPOLIS.

FOR actual service, pleasure and satisfaction the automobile is invaluable for one engaged in general practice.

Five years ago I began to use an auto. The increasing difficulties attending the selection and maintenance of horses and keeping a coachman made it necessary to adopt some other means of transportation, as the attention required by these details seriously interfered with my practice and added much to my work.

Use a Gasoline Car.

I first tried electric cars for about two years, and found them impracticable because of the expense of maintenance, the limited capacity of service and the time required in keeping them charged. I decided to try a gasoline car, and purchased a four-cylinder, air-cooled machine, because of its simplicity of construction and the avoidance of difficulty with water in freezing weather. I very much prefer a four-cylinder engine because of the smoothness with which it runs and the advantage of enabling you to get to and from houses of sick people with much less noise than a single or double cylinder machine. The added H. P. of a four-cylinder engine while not often required, is frequently very much needed, and the selection of a car of too low H. P. is, to my mind, one of the serious mistakes often made in the buying of a car which is intended for every-day work over roads and under conditions which you can not select or control. Occasionally, as in our recent heavy snowfall, which lay on the ground for a period of two weeks to a depth of 12 inches on a level and in many places where the snow had been swept from the sidewalks and street-car tracks into the street the depth exceeded two feet, to be able to drive every day and meet with practically no delay in speed convinced me of the supreme importance of having plenty of reserve power. For two days of our recent snowstorm, when our street cars were tied up and horses soon fagged out or made very slow speed at best, to be able to go without delay and without inconvenience except the difficulty of steering, certainly makes me almost an enthusiast in the use of an automobile for a physician engaged in general practice. There is a great advantage in selecting a car of good and simple construction and then using one make. Most of the inconveniences experienced by those who have had no experience with gasoline engines arise from trifling things which could easily have been avoided had the driver any understanding of the proper care of his car, and yet the machine was condemned as being impractical when the fault was the driver's ignorance.

Nominal Expense for Maintenance.

As to expense, my gasoline, lubricating oil and repairs average less than $10 a month the year through. To this must be added, of course, the expense of new tires (about $140); if properly cared for the outer casing, in my experience, will last about one year. The total expense is very much cheaper than the same amount of work could be done with the use of horses, to say nothing of the extreme satisfaction as well as the economy in time in getting about. On a busy day I save about two hours' time by the additional speed which I am able to make.

Less Worry Less Expense, More Comfort.

Formerly I kept three horses for my work, but the selection and caring for them caused me very much anxiety aside from the dread of always being dependent on a coachman, a very unreliable employé at best. With my machine, which I always drive myself, my hurried or long calls and night work are done with little of my former worry, and with my enclosed car, the body of which I had built and put on the chassis of the same style that I formerly drove, rain and snow, and most of all, the cold wintry winds, no longer annoy me, and after a day's work with practically no exposure, I have a feeling of supreme pleasure of having made a very great saving of time. At first I kept my car in a garage, but this soon proved unsatisfactory because of the expense and the impracticability of having it delivered to my house or office. I now keep my car at my home for less than half the expense of storage. As I employ a man for my house and yard at all times, I find with a very litle time and explanation as to the care and attention to essential points which I am able to point out to him, my car is always ready, and I can stand a strike on the part of my stableman much better than when I was keeping horses. I train my man to wash, oil and care for the important parts of my car, but do not permit him to drive it, as I find that the average man as soon as he is able to take a car on the road has little interest in anything else.

My first car I drove about 10,000 miles, using it in all kinds of weather, hot or cold. My last enclosed one (181) I have not driven such a mileage, but it has proven much more comfortable and convenient, and requires, if possible, less attention owing largely to the better perfection in detail of the carburetor, commutator and spark coil used in its construction. The box deck on these cars I find a very convenient place to carry my cases and other paraphernalia.

I can not praise too highly the real value of an automobile for the use of physicians regularly engaged in general practice, for when properly cared for, as well as driven, which is too frequently not the case, I find on average good roads it can not be compared to a horse.

THE MOTOR CYCLE FOR THE COUNTRY DOCTOR.

W. NICHOLAS LACKEY, M.D.
GALLATIN, TENN.

REALIZING that it is good to have a hobby—one to ride in reality and not figuratively speaking—and having a mechanical turn of mind, my hobby for the past five years has been mechanically propelled vehicles.

Autoists Must Study Their Cars.

During the last four years I have driven half a dozen makes of cars (191), and on numerous occasions I have driven the automobile to see patients under trying conditions of road and weather.

Fig. 25.—Protected in a pouring rain. The physician has dropped the rubber curtain while the photograph is taken.

Let me say right here to prospective purchasers of automobiles, for country practice, if you don't like machinery and are afraid of getting grease on your hands in acquiring a thorough knowledge of every part of your car, and don't feel that you have the time to read up on the principles of the gasoline engine, don't be deluded into buying an automobile, for you will meet only with disappointment in its use. Your success in using it in your practice will depend on the amount of knowledge you possess of its every part, for even the best constructed gasoline motor will at times give trouble. With a bit of trash clogging the nozzle of your carburetor, or a loose or broken commutator spring, or a short circuit in your wiring, you will be just as helpless ten or twelve miles from home, and the town mechanic, as you would be if your car had dashed against a stone wall and converted itself into a scrap heap.

The expense of upkeep, and especially that of replacing injured and worn-out tires, is the principal objection to the automobile for the country doctor, who is usually in moderate circumstances financially. The low cost of keeping a horse and buggy in the country and in the small towns makes it hard for the automobile to compete, from the standpoint of expense, though the saving in time, a greater range of mileage, will, to a certain extent, throw the balance in favor of the automobile. The price of one full set of new tires, however, in my town, will nearly pay the feed bill for "old Dobbin" for seven or eight months. In the city the expense of the horse-drawn rig is, of course, greater, so there is not such a disproportion between the expense of the two modes of locomotion.

Manufacturers Are Indifferent.

I don't believe that the automobile has yet been constructed which is in every way as thoroughly practical for the country doctor every day in the year, winter and summer, as it should be. The cause is the indifference or ignorance on the part of the manufacturers, of the practical requirements of a car which would be adaptable to the needs of the doctor.

Ideal Car for Country Doctor.

My idea for a car for the country doctor is as follows: The car should be of the runabout type, two air-cooled cylinders, from 7 to 12-horsepower. It should be equipped with solid tires—several makes of solid tires are now on the market. While they decrease the speed and increase the danger of injuring the machinery from the jars and shocks unavoidable on the road, still if driven with care over rough road this objection, to a certain extent, would be overcome; but the freedom from delay on starting on a hurry call and finding a deflated tire, delay on the road from punctures and blowouts, longer life, and the doing away with the actual manual labor of pumping up tires, recommend them over the very unreliable pneumatic tires, for the doctor's use, anyway. The car should be equipped with a Holley carburetor, which, owing to its giving your cylinders a better mixture, will produce from one and one-half to two additional horse-power. The saving in gasoline alone will pay for it in a few months. The ignition device should be of the most reliable type, for this is usually, with the exception of the tires, the most unreliable part of the automobile. The body should be so constructed that every part of the machinery is easily accessible for cleaning, oiling and adjusting. The planetary change-speed gear and transmission is practical for the runabout, and with proper care rarely gives trouble. The car should strike the happy medium when it comes to weight. The light but strong runabout, with engine of ample power, can negotiate muddy and sandy roads, where many of the heavier machines would come to grief. The tool box of the doctor's car should contain everything necessary to make any reasonable repair while on the road. A top with a full complement of side curtains and storm aprons, also a well-fitting boot, to protect the engine and especially the carburetor from mud and water. All are necessary for the doctor's car, which is to be used in all kinds of weather.

Points in Selecting Car.

To my mind, the points in selecting the car for the use of the country doctor should be in the order named: Reliability, durability, economy of upkeep, hill-climbing ability, price, ease of control, speed, and lastly, appearance. Our roads in Tennessee are above the average, those in middle Tennessee being macadamized turnpikes, but it is not how fast the car can run over the roads, but how fast the roads will let the car run without racking it to pieces. This I know from experience, in driving through the country in a car equipped with a speedometer, to be from 15 to 18 or 20 miles an hour (usually between 16 and 18). Almost any make of car has speed to spare, but the other points named are of much more importance and are not possessed by all makes of cars by any means.

Expense.

Avoiding bad accidents, a doctor who understands his car houses it and does most of the adjusting and small repairing, should drive his car at the expense of from $175 to $200 a year. This is not counting depreciation on car and interest on money invested.

A doctor equipped with a car somewhat as above described, and a good reliable make of motor cycle, ought to be independent of the horse, provided he has no patients who live very far off the roads.

Advantages of Motor Cycle.

I believe the up-to-date motor cycle (198) to be the automobile for the poor country doctor—at least during the summer and fall months when the roads are dry. They can not be used in the mud. Even if he possesses the more expensive automobile, he will find himself learning more and more to enjoy the powerful little machine in its exhilarating rush up hill and down to the bedside of his patients. One of these machines will save many a dollar on operating expenses in a season on an automobile. I have ridden thousands of miles on a motor cycle and have never failed to reach my patient on time or had to walk home. I have ridden long distances in emergency cases, in the country, at a 30-mile-an-hour clip, and have also responded to calls at night on my motor cycle (192), which is equipped with a strong acetylene lamp. The white road spinning beneath my wheels, with the dark shadows fleeing before the light, with the cool night air blowing on my face, have added not a little sport to the occasion.

$3.50 a Month for Expenses.

The expense of operating one of these machines is about $3.50 a month, including gasoline, batteries and oil, tires not included. One set of tires usually lasts two seasons.

You can get more downright service and comfort out of one of these little machines, the weather permitting, than out of an automobile. Before I bought my motor cycle I was extremely skeptical as to its practicability, but a few months' constant use proved to me the wonderful amount of work that can be accomplished with one of these little time savers.

The automobile enables the country doctor to cover five times the amount of territory in his practice that could be traveled with a horse. The great amount of time saved to attend to his office work, more prompt answer to emergency calls, the long irksome drive converted into an actual pleasure rather than a thing to be dreaded. Last, but not least, the advertisement afforded by the automobile is not without value as a practice getter. These are a few of the advantages of the automobile.

In conclusion, let me say, don't purchase an automobile because of its paint or gaudy appearance. The motor is the heart and soul of your new steed. Study the subject theoretically and practically, if possible, on the machines owned by your friends, and then with the advice of a trustworthy and competent mechanic, make your purchase of a new and up-to-date model. Don't make the mistake of buying a second-hand car. There are some exceptions I know, but my experience is that it costs more to get a second-hand car in good shape than it does to purchase a new one outright. The automobile, used with due consideration to the people who drive horses, will add to your influence as a modern and up-to-date practitioner of medicine in your community.

THE AUTO SUPERIOR TO THE HORSE.

A. E. MACKAY, M.D.
PORTLAND, ORE.

FOR the use of a motor car the climatic conditions here are almost ideal at all times of the year, but the lack of good roads in outlying districts interferes considerably during the wet season, for it must be admitted that the automobile requires fairly good roads to ensure economy and comfort.

For the past four years I have used almost continuously a machine of the runabout class and have kept accurate account of all expenses in connection with the use of the vehicle. My first machine was a small runabout (190), used every day, summer and winter, for two years and four months, at an average cost of $21 a month. Including the loss on sale when disposing of it to buy my second vehicle, the monthly expense amounted to $34. My second machine of the same type, and for eleven months' use, including the loss on sale, showed an average monthly cost of $37. My third venture was slightly more pretentious, a touring runabout, which has been in constant use for ten months, and will average, including an estimate for overhauling and painting this spring, about $38 each month. These estimates include all expenditures, gasoline, carbide, tires, repairs and a garage charge of from $10 to $15 a month, which one might easily save if a private garage or stable could be secured at home.

Suggestions for a Prospective Purchaser.

Most of the up-to-date automobiles are very reliable and fairly fool proof. An investor should insist on a machine being thoroughly protected from dust, water and mud, should demand that hand levers, steering posts and such other means for controlling the car be so placed that a driver could enter his car from either side, should choose a vehicle with clutch drive and simple air-cooled engine, with modern wheel base, so that complete towns could easily be made on an ordinary thoroughfare, with moderate weight, thus obviating undue wear on tires, and with one seat, so that the temptation to overload the car will be avoided, and then work for good roads and streets first, last and all the time.

In reviewing my experiences and comparing them with those who employ the horse-drawn vehicle, everything seems to favor the automobile. When the motor car is disabled it requires but a short time to place it in commisson again, but with a horse disability means either a long holiday in pasture or the policeman's bullet. The automobile is patient, reliable, ever ready, and after a hard day's work it still can be used for a pleasant evening drive or as a means of conveyance for oneself and wife to theater or social function.

To the prospective purchaser, my advice would be: Look over your field of activity and if fairly good roads prevail, buy your choice of motor car, giving preference always to the manufacturer who has a reliable agent in your town or near vicinity, and I feel assured that the large amount of time saved and the pleasure and diversion obtained will amply repay for additional expense over other means of transportation.

WRITES OF MUCH TROUBLE, BUT IS NOT DISCOURAGED.

BY A CHICAGO PHYSICAN (211).

BEING naturally fond of machinery, I took the automobile fever early, but managed by prudence to hold it in check for about four years. At length I purchased a small second-hand steamer (212) that I kept about three months. I ran it altogether about 400 or 500 miles, and finally sold it at a total expense of about $300. Later, I bought a new strong gasoline machine, which I think is one of the best on the market. The first year my bills for gasoline and repairs were only $600, although the repairs were mostly made by my son at no cost for labor. The next year I thought I would take a short country run, so started out one fine June day with my son as chauffeur and my brother and daughter as guests. For the first 60 miles I thought I was having the finest time in my life. Trouble came thick and fast for the next 20 miles; then I sent my daughter on by train; the rest of us stayed over night and the next day we limped into the town of our destination, 100 miles from the city, eighteen hours behind time. The next day being Sunday, we visited with our friends and the following morning my daughter and myself came home by railroad, leaving my brother and son to make repairs and to come with the machine. They were finally towed into the city five days later. My repair bill, as my son did all the work, was only $50, but I had to send the machine to the shop immediately. There they tinkered with it about two months, on four different occasions, pronouncing it all right; but on taking it out it would balk absolutely within from 5 to 15 miles on fine boulevards. The total mileage for these few weeks was about 100, cost $200. I then sent the machine to the factory, where it was put in good order, and it has since that time run beautifully whenever the wheels and tires would permit. In the meantime, I had bought another new car, which was a fine piece of machinery, but my troubles have not lessened materially. I have kept an accurate account and the expense of maintenance, including chauffeur and depreciation, has not been far from 75 cents a mile; but we have never had any very bad luck, have never hurt anyone else, never been sued for damages, only arrested once and never caused an actual runaway. My man had his leg and arm badly hurt by kick-backs, which cost considerable time, but as I was a physician the doctor's bills were small. My son had his arm broken in the same way, and this kept him home from college for six weeks, but we think we have a great deal to be thankful for. I am still optimistic. I own two machines now, though just at present neither of them is in commission, but I anticipate a great deal of pleasure in the future.

The Enthusiast Forgets His Troubles.

I have a suspicion that those who report very little trouble often have short memories; but I am sure the best time to own a car is before it is six months old, and that afterward one must expect a lot of trouble. The machines are being constantly improved and the time will come when they can be handled almost as easily as a sewing machine.

I am a thorough believer in the automobile, but think that at present its cost is fully twice that of horses and carriages, but when it runs it beats the latter "all hollow."

AUTOS NOT YET PLANNED FOR PHYSICIAN'S NEEDS.

HERBERT T. CLOUGH, M.D.

BANGOR, MAINE.

DURING the spring of 1905 I purchased a three-cylinder gasoline runabout (139), with top, in appearance more like a phaeton than like the conventional type of automobile. I keep the machine near my office and look after it myself, this work affording me quite as much pleasure and recreation as the use of the vehicle on the road. I used the machine continuously until snow began to fly last fall, under all conditions of weather which might be expected during the summer and fall seasons and over all kinds of roads—mostly bad roads—for we haven't anything in the way of roads to boast of in this section of the country.

Trouble Less Than with Horses.

On the whole my troubles have been fewer and less annoying than has ever been my experience with the horse-drawn vehicle for the same number of miles traveled; while the exhilaration, and freedom from anxiety for the horse's welfare, affords a real rest in a long drive, which is absent when a horse furnishes the power.

Less Than Three Dollars a Year for Repairs.

My expenses for repairs during the entire season was $2.50, but I had no tire trouble. Allowing for tire repairs (for most men will not be so fortunate as I) I think $8 to $10 a month will cover all cost of maintenance. My machine is very easy on tires, most of the weight being on the rear wheels, which are 36 inches in diameter.

I believe the automobile can be made a thoroughly practical vehicle for the every-day use of the physician, and that in time it will add to his income, pleasure and span of life; but that time has not arrived—at least, not to all physicians. To those, who, like myself, enjoy caring for their machines, or at least supervising such care, many of the faults as now constructed can be kept righted and trouble anticipated and avoided. Such men will find pleasure in the use of the automobile, while those who lack interest in machinery, and who, therefore, give no attention to the mechanism, will leave the way open for troubles which will discourage its use.

Mechanical Perfection to Come in Future.

Later, the faults will have been largely eliminated, and at the same time a class of mechanics will have been educated in the care of these machines, so that when an accident does occur it will be easy to step into a shop and have it remedied, just as now when a horse loses a shoe. Little attention has been given the automobile as applied to the physician's needs, nor can we expect such attention so long as the more reliable makers can find a market for their product as now turned out, faster than they can turn it out. The demands of luxury must first be met; when these are supplied, then inventive genius will find the way to eliminate the troubles, and to attain that reliability which a physician, above all other users of the automobile, needs. The difficulties are not insurmountable, and will be remedied as soon as the industry has caught up with the demands of the public.

ADVANTAGES AND DISADVANTAGES.

S. B. DICKINSON, M.D.
WATERTOWN, S. DAK.

HAVING used an automobile for nearly three years, both winter and summer, I am convinced of the truth of the following statements: 1. The average physician can use an automobile to advantage in his practice. 2. It must be a practical machine. 3. He should know it from stem to stern. 4. He should have as much consideration for his machine as he should for a horse.

The advantages may be summed as follows: Time saved, conveniences too numerous to mention, recreation and precedence. The disadvantages may be boiled down to this statement: less the liability of trouble on the road.

Requires More Patience Than a Hysterical Woman.

By the average physician, I mean the physician who has a reasonable amount of self-control. A man can not be impatient or "rattle-headed" and operate a car successfully through thick and thin. Trouble will come, and he must often have more patience than is sometimes necessary with a hysterical woman.

A physician requires a machine with plenty of power, moderate speed, 25 to 30 miles an hour, reliable in every particular, plenty of luggage space and high enough from the ground to clear stones and ridges. I know of no machine on the market to-day that meets all these requirements unless it be one make of machine with high wheels, solid tires and cable drive, and I can not help but look with favor on this machine.

Tires Are the Hardest Problem.

Do not expect a machine to do proper work unless properly oiled, properly adjusted and properly housed. I have left my machine (138) standing over night in a temperature 25 degrees below zero and started it the next morning and kept it running for fifteen or twenty minutes and then stopped; but I do not claim that it did the machine any good, for the oil was so thick that it did not lubricate the cylinder. I have also run my machine without water in the cooler, thinking I could make a certain point before stopping; by so doing I caused a crack in the water jacket.

I shall never discard the auto for the horse in my practice.

PHYSICIANS' CLUB TO MANUFACTURE IDEAL MACHINES.

L. M. ALLEN, M.D.
SOUTH NORWALK, CONN.

DURING the past three years I have been using a 10-horsepower, single-cylinder, water-cooled, gasoline automobile (140), costing $850, and I expect to use the same car three years more, unless something very much better is put on the market at a reasonable price. In my practice the automobile has not been nearly as expensive as two horses and a man, but somewhat more expensive than one horse boarded at the livery stable. Maintenance and repairs cost a little over $35 a month, while to keep a horse at the livery stable costs $20 a month; shoeing, $2; a boy to drive, $15; wear and tear something over $5 a month.

Keeps in Running Order All the Time.

During the past winter I have depended on my car entirely. Last winter I used my car until the first of February and the winter before that until the first of January. My car is seldom out of commission, and is almost always tuned up to do its best, because I usually spend about half an hour every morning looking over it and making little improvements in the adjustments, and the time so spent is a pleasant pastime.

I have been waiting and expecting every year to see something more suitable for the doctor's use put on the market at a reasonable price. If we could have something of about 15 horsepower, geared with several speeds, one speed of about 8 miles an hour for very heavy roads, we could push through everything at that speed, up hill and down, through mud and snow; whereas now we have to take the bad places under slow speed. Some may think 8 miles an hour very slow, but that is only for the very bad roads.

Club Together and Buy One Thousand Ideal Machines.

Here is an idea that persists in presenting itself to my mind. There are so many physicians looking for suitable automobiles for their work, and there is such unanimity of opinion regarding the power and general style of automobiles required, why not club together and give the contract to some reliable manufacturer to build a thousand automobiles (or ten thousand, if needed), all of one style and power? Such a car could be built for a little more than half the price now paid, by saving the big commission now paid to the agent and the enormous expense of advertising and by getting the advantage of the reduced price of building a great number of duplicate parts.

The contract might be given to the lowest bidder who would build the cars according to specifications. If some manufacturer were only alive to the opportunity, he could get orders for any number of cars, and a deposit on them before the cars were commenced.

THE GASOLINE AUTOMOBILE A FAILURE.

E. J. GALLAGHER, M.D.
NEW YORK CITY.

I HAVE had the painful experience of having been one of the pioneers in the use of the gasoline automobile (144) as applied to a physician's use, and I unqualifiedly say that they are failures, for several reasons. They are unreliable and always in trouble and require an engineer to run and to take care of them. They need daily care; one can't let them go two or three days without oiling, tightening loose bolts, etc., as with a buggy.

Continued Trouble and Worry.

Of course, a horse needs some care, but the liveryman or stableman will do that and clean the buggy also for $25 a month in this city. In the garages, on the other hand, they simply wash the automobile and polish the brasses for from $15 to $25 a month; all the oiling, etc., the physician must do himself or have it done and pay for it extra. Even when one pays for it the men in the garages either forget to do it or half do it, so one goes out in a pleasant frame of mind and after a mile or two is obliged to get out the oil can and get busy hunting for that squeaking bearing, and at the same time add some oil and grease to both hands and clothes.

The Auto Can Not Be Depended On.

The garage charges do not include gasoline or cylinder oil or oil for wheels and bearings (the latter is usually supplied by the liveryman if one uses a horse). It is very difficult to convey any idea of the unreliability of the automobile, but it is so unreliable that it is practically useless to a busy man. It is expensive, as any small part is charged for excessively by the makers of the car, and, in addition, the repair men have a very playful habit of charging from 60 to 70 cents an hour for their work, and even then are not satisfied, but will charge for thirty hours when they have only worked ten hours on the car.

The tires are very expensive and a nuisance; if they are pneumatics they puncture and blow out and require constant care. The solid tires are expensive in first cost and make the car anything but an easy-riding vehicle.

Horse a Thousand Times More Reliable.

While the automobile can be shown to be much cheaper than the horse (on paper), I am satisfied from my experience that the horse is far cheaper and a thousand times more reliable. The automobile that is reliable enough for a physician's use in the city is not made, so what can be said of it for a country doctor's use?

Every Autoist Praises His Own Car.

This is a strange thing to say, but many people (doctors, as well as others) always praise their automobiles, and, no matter how many troubles they may have with it, or how much the expense may be, they never say a word (in public) against that particular machine. Whether they are ashamed to show how badly they have been victimized or not, I don't know, but it is a fact that if one becomes an owner of a car he also becomes a selling agent for that car. Knowing in his heart that it is not suited for his or any physician's use, still he praises it as the only car worth buying. The troubles of the auto are many and the expenses heavy, for nearly all of the repair men are a pack of cormorants and charge excessively for any work they may do. If any of your readers want more of my experience they can have it willingly.

THE SIMPLE RUNABOUT FOR THE PHYSICIAN.

WILLIAM THOMPSON, M.D.
CHICAGO.

HAVING used motor cars for work and pleasure for over three years, I feel that I have had some experience. My first machine (206), a one-cylinder runabout, was among the first of that particular manufacture to reach Chicago, and had many weak points, but I suppose it represented a fair article at that period of automobile development in this country. The expenses for repair and general up-keep for this machine were more than they should have been because I was a beginner and had to learn. My next experience was with a so-called ten-horsepower, four seated touring car (207) of pretentious appearance and very much noise; thank heaven, it has become obsolete. My next machine (208) was of standard make, two-cylinder under a bonnet, rated at 12 to 14 horse power, but as nearly as I can calculate 8½ horse power was about the proper rating. It gave good service, however. I next invested in a four-cylinder car (209) of good size and power, assembled by a local dealer who only put out about a dozen of the same type and who, I believe, has not brought out any since. The engine was made in a reliable factory and the chassis from one of the best part houses in the country and was generally satisfactory. The engine is as good as ever and I believe that for the amount of wear and tear this machine has seen it ranks equal with any modern priced touring car on market. My expenses for the year 1905 for repairs of all kinds, gasoline and storage, have amounted to a little less than $300. Since October, however, I have had my own barn and of course have had no storage bill, but the expenses for cleaning, etc., have been just the same.

Much has been written regarding the physician's ideal car, but I do not think that it is yet on the market. It is certainly not the horseless buggy that advertises itself as ideal, nor some of the runabouts of cheap material and poor assembling. The nearest to it which I have seen are the 6 and 8-horsepower cars (210) that are so popular among English physicians or the small Peugeot type which is no longer manufactured.

Runabouts Are Not Well Made.

In this country the greatest advancement in motor car building has been made in touring cars and commercial vehicles; vanadium and chrome nickel steels are not used in runabouts as they are in touring cars, and until the manufacturers use the same grades of material in runabouts that they put into higher grade touring cars the runabout must be short lived.

Not all physicians would consider runabouts the most desirable for their purposes. In large cities, with well-paved streets, and particularly where one wishes occasionally to take his family into the suburbs for short runs, the touring car is preferred.

The Need of Fool-Proof Mechanism.

We hear a great deal about four cylinders as giving a much more even torque than the two cylinders; granted this advantage to the four-cylinder car, I don't think that we should underestimate the well-balanced two-cylinder or one-cylinder car, particularly when the two is a horizontal opposed under a bonnet and in front of the driver. For simplicity and "get-at-ability" it is the ideal for the novice. One whose mechanical ability is below the standard should have a machine with simplest "fool-proof" mechanism unless he employs a skilled mechanic. The more experienced motorist who has graduated from the runabout and who has a fondness for things mechanical will find more pleasure in the touring car.

Avoid fads and novelties and adhere to standard types built by reliable firms. Buy your motor as you would your horse, not for one season, but for many. Study its anatomy and physiology and all the pathology that you can acquire—I do not believe that any one man can know all the pathology of the motor.

THE EXPENSIVE REPAIR SHOP.

PARKS RITCHIE, M.D.
ST. PAUL, MINN.

EITHER I was unfortunate in my selection of a complicated machine, easily and frequently out of order, or, like the gentleman traveling from Jerusalem to Jericho, I "fell among thieves." Besides the salary of my chauffeur, my expenses for 1905 averaged $70 per month; too much for a two-cylindered runabout (112).

Too many boys are learning their trade in the garage at the expense of the unfortunate owner. It is marvelous how the hours roll up in the repair of the most trivial part of the machine.

Never Knew Before What Luxury Was.

In January, 1905, I changed to an electric with coupe top (113). I never knew before what luxury meant. The serious objection is the short mileage and limitation to city streets. The ideal combination would be the electric for comfort and pleasure on good streets, and a gasoline runabout for hurry calls.

Could Not Again be Content with Horses.

In the near future the automobile garage will be conducted more on business principles, and the boys who learned on our machines will be able to do skilled work. In spite of some grievous experience, I could not be content again with horses.

THE AUTO A LUXURY FOR THE WELL-TO-DO.

BY A PHYSICIAN ON THE WESTERN PLAINS (193).

FROM a practical standpoint, for a man doing business in the city, an electric auto is a convenience and a delight, and is much more satisfactory than a horse. If necessary to leave the paved streets, it is about as unreliable as anything can be. It does not work well in the mud; this from observation.

I own a gasoline motor car (194) of the Stanhope type. On the pavement, even in bad weather, except in winter, it is a constant source of pleasure and a great time saver. In muddy weather, off the pavement, it is about as useless a piece of property as one can conceive of. I have had only one winter's experience with it—a very unsatisfactory one—but I admit that I have not used an antifreezing mixture.

Unless Well-To-Do, Stick to Your Horse.

The chief trouble with a Stanhope or any small car is the want of power. The constant demand is for more power. If a Stanhope type could be constructed with a 30 or 40-horsepower engine, I believe it would be an ideal machine for all conditions. One could get speed if he needed it, and power enough to maintain a greater speed under nearly all circumstances.

I am a firm believer in the automobile, but at the present time, if I may judge of them from my own limited experience, I would say that they are a luxury to be enjoyed by the well-to-do. The poor devil had better stick to his horse.

SUGGESTIONS AS TO THE PURCHASE OF A RUNABOUT.

GEORGE L. RICHARDS, M.D.
FALL RIVER, MASS.

LITTLE value, it seems to me, can be derived by the intending purchaser of an automobile from the statements of users during the last two or three years, because the first machines were very crude and necessarily cost considerable to operate, and were only partially satisfactory even then; whereas at the present time machines that run well can be purchased at reasonable cost.

The Engine Should Be Very Accessible.

The physician who intends to use his automobile for his daily work should choose it with due regard to the needs of that work. Since the average physician is, as a rule, not much of a mechanic and is seldom dressed in a mechanic's garb, his machine should be of the simplest possible construction and with all parts as nearly accessible as possible. After experience with engine under the body and under the hood, and with chain drive and shaft drive, I should discard entirely the chain and the engine under the body, for the reason that the chain is dirty, constantly lengthening and not infrequently breaks; the engine under the body is inaccessible, and even slight adjustments and repairs can not be made without getting oneself covered with grease and dirt, whereas a suitably constructed engine placed under the hood is accessible as to simple adjustments and even small repairs without the necessity of changing one's clothing and without having to get on one's back.

I should discard the single cylinder entirely, on account of its noise and general shake. A double opposed, horizontal, two-cylinder engine or a two-cylinder vertical, if of sufficient size, will furnish ample power. The two-cylinder horizontal opposed will make much less noise and will be more comfortable for the rider than the vertical engine, but is not as accessible. I use a two-cylinder, 10-horsepower horizontal opposed, engine under hood, shaft drive machine (199) for my work and find it satisfactory.

As a physician uses his machine in all weathers, it should generate about twice as much power as would ordinarily be needed, and should run for the most part on its high speed, which should be capable of being throttled down for all ordinary emergencies without requiring the use of the low speed at all. Where two cylinders are used they should not be less than 4x4, and preferably 5x5, since heavy roads, mud and hills often put extra strain on the engine. Two-cylinder motors of the runabout class can be obtained at from $800 to $1,000, and should give a sufficient amount of power for one person. These are all water-cooled motors.

Air-Cooling Mechanism Favored.

Now, water-cooling, while satisfactory eight months in the year, requires an antifreezing solution in cold weather; if one forgets to put this in in time, cylinders, radiator or pump will freeze, with a resultant bill for repairs. Hence, other things being equal, a successful air-cooled motor should appeal to the physician rather than a water-cooled one. On the other hand, there is no air-cooled motor at present on the market which can be had for less than $1,400 for a four-cylinder physician's runabout (200). I am not sure, however, but that the difference in price would be more than made up in comfort to the owner. Many physicians of my acquaintance use air-cooled motors with perfect satisfaction. For non-freezing I have used both calcium chlorid and a combination of two-fifths alcohol and three-fifths water. If the calcium chlorid is pure, I do not think it acts on either the copper radiators or the rubber tubes. It is cheaper than alcohol and has the advantage that as the water evaporates by the heat, all that is required is to add more water, while the alcohol solution constantly uses up the alcohol by evaporation and has to have more alcohol added.

Whatever engine is chosen should have a simple clutch mechanism. For a physician's use I think the simple, two-speed planetary clutch with direct drive on the high speed is as advantageous as any, and with an engine of sufficient power so that nearly all work can be done on the high speed, makes much less noise and is really more satisfactory than the more elaborate three-speed, sliding-clutch transmission mechanism, which makes considerable noise on both the first and second speeds.

Importance of Good Oiling Service.

An efficient oiling arrangement should be an essential part of a car and should be carefully looked after by the intending purchaser, as gasoline engines running at high speed require constant lubrication, and there is immediate trouble in case the lubrication is at fault. This should be looked out for early, and if there are many tubes the owner should see that all of the tubes feed oil properly. I have had the experience of having one tube clog, with the result that one of the piston cranks heated, the babbitt all melted and the entire cylinder had to be taken out for repairs, due entirely to defective oiling.

The car should be light and of long wheel base, and a weight of not much over 75 to 80 pounds per horsepower. The extra weight is of no advantage, requires power to move and increases the tire cost.

The Tire Problem.

Tires have been one of the great bugbears, but I have found that if a tire a little larger than the maker provides on the machine be used, the tire cost is very much reduced. Although all the makes of tires cost the same price, there is a great difference in the quality and in the way the purchaser is treated by the individual tire concerns (202) and if the physician chooses his tire right there will not be as much trouble in the future. I prefer the simple clincher, which goes on and off the rim easily and can be detached and a new tube put in in a very short space of time even on the road (201). I have made experiments with various forms of tire covers and have abandoned them all as impracticable and not commensurate with their cost. The rear tires can be equipped to advantage with the Bailey tread, which is put on by all tire makers. The statements which accompany the advertisements of a tire amount to nothing. The only way you can find out about them is from users.

After having various things tumble out of my first machine (203) while it was going, I made one change in design which I think could be adopted with advantage by makers of runabouts for physicians' use, namely, the addition of a three-inch side-piece to prevent small things and one's bag from tumbling out of the car. As a physician often carries various bags and bundles, this small point is one of some importance. It is also easier to keep the feet warm in winter when the side panel is employed.

It will probably cost more to keep an automobile than a horse, yet the machine does a great deal more work than the horse and does it very much more quickly; one can also take his family or friends in it to an extent that a horse-drawn vehicle would not be capable of. I live a portion of each year 17 miles from my office and make the trip in from fifty minutes to an hour, when the length of time required by street car would be so great as to preclude the possibility of such residence.

The Manufacturers of Whom to Buy.

Every automobile built requires attention and repairs. The intending purchaser should choose that one which seems the most simple, has abundant power, whose manufacturer is anxious to have the machine satisfactory to the purchaser (many manufacturers do not seem to care), and it should receive constant oversight from its owner. Under these conditions it is doubtful if many physicians, who once begin the use of an automobile, will return to the horse.

Automobilia of Punbad the Railer.

Judge not an auto by its smell; all comparisons are odorous.
It is a short ride that hath no mending.
All does not go that glitters.
An auto is not without odor save in its own front seat.
Oils well that ends well.
To speed is human; to be caught is—fine!—*Century.*

A TERSE ENDORSEMENT.

E. H. KESSLER, M.D.
ST. LOUIS.

ON paved streets the automobile is practicable the year round. The roads are the only consideration, the condition of the weather cuts no figure.

To say what car a physician should buy is not easy. After nine years of daily use the car which comes nearest my ideal is the following for a runabout: The engine in front. A three-speed sliding transmission, shaft drive, with engine and transmission well protected from below from mud, water and dust. The car will weigh 1200 to 1400 pounds, and the engine will develop 12 to 14 H.-P. When the doctor has such a car as I describe he will have the best the world is producing to-day.

Can the average doctor run an automobile and look after it himself? Sure; it is not near as complicated a piece of machinery as the human body. With a couple of weeks' application any one of average intelligence can get along fairly well with the average car. For winters' use a few extra things must be considered, which in the summer give no trouble.

THE OBJECTIONS TO THE USE OF THE HORSE.

HARRY SUMNER KISKADDEN, M.D.
DETROIT.

EIGHTEEN years' experience with horses and two with an automobile convince me that the machine is preferable, because the same calls, especially if scattered, can be made in about one-half the time, icy streets and slippery asphalt are gone over like dry summer pavements, raw winds, cold rains, sleet and snow never make you pity the poor horse, you never shorten your call because your horse is standing, overheated, in a cold rain, nor go to the window to see if he is tired of waiting for you and gone to the barn; you don't have to stop to tie and blanket, nor untie and uncover, you can leave your machine stand in any kind of weather, in front of your office for hours, you never smell of a sweaty horse, nor are you covered with hair blown on you from his loose spring coat.

The automobile has many troubles which only he who drives one can know about, but with each year's improvements these defects are disappearing. My experience has been with a gasoline machine (204), a two-cylinder 16-H. P. type, with engines under the body and chain drive. For winter I used an ordinary top with plate-glass storm front, which kept me perfectly warm and dry in all kinds of weather. I now drive a three-cylinder, 28-H. P. machine (205), with two-cycle engines under hood, sliding gear transmission and shaft drive. This machine starts on the spark without cranking and is much quieter and cleaner than the old machine was with its engines under the body.

In Long Run Auto Is More Expensive.

While the upkeep and operating expenses of an automobile are about the same as that of a pair of horses, the life of the machine is not as long as that of the horse, and the necessity of a new one in two or three years makes the auto, in the long run, the more expensive. My first machine cost $1,200. The maintenance was $25 to $30 a month. After two years' use I sold it for $700; this would bring maintenance and depreciation up to about $50 a month. One of my boys took care of the auto; had I kept a man, as I did with horses, the average cost a month would have been $85 or $90. My machine with five passenger body cost $1,500. The extra coupe body for winter use will cost about $500 more. This is a two-cycle engine machine, and I believe it can be maintained at an average cost not to exceed $15 a month. A two-cycle engine has twenty-five to thirty less small parts to get out of order than a four-cycle engine, and I believe is the coming motive power for automobile use. The maintenance of a pair of horses, kept in my own barn, including man's salary, was about $65 to $70 per month, not including depreciation of horses and four vehicles (closed carriage, single top buggy, surrey and cutter). The maintenance of two horses, closed carriage and single buggy (not including driver) in boarding barn was about $45 a month. This one fact must ever be kept in mind, that you go so easily and so fast with the machine that during the year you make three or four times the mileage that you make with a horse.

Ignorance Is Not Bliss.

Know the anatomy of your car and be able to tell by its pulse and respiration whether it is doing healthy, perfect work. I know a man who drives an automobile and knows so little about it that on one occasion when the lap robe caught on the switch and threw it off he abandoned the machine, took to a street car and sent a man to get the "thing"; the man had only to throw on the switch, crank the engine, get in and ride home.

A PLEA FOR SIMPLICITY IN CONSTRUCTION.

WILLIAM FULLER, M.D.
CHICAGO.

EXPERIENCE with five different machines, during as many years, has almost at times convinced me that a good old horse had many desirable and unappreciated qualities, and that the trolley and cable cars were very economical as a means of travel and entailed but very little worry or responsibility.

But that the automobile has come to stay, and that it will eventually supersede all other means as an aid to the physician in his work, lacks no further proof or demonstration. The real question then arises, what machine will prove most practicable and satisfactory under all conditions of weather, and will give not only the least trouble, but prove the most economical? In my judgment it is that machine which is simple in construction, with four or preferably two cylinders, air cooled and with 10 to 20 horsepower. It should weigh 1,000 pounds or less and be equipped with solid tires. I use a machine (188) which cost me $650, without top, and which has cost me less than $15 each month for repairs, gasoline, oil and electricity.

The Tire Trouble.

The average automobile in use to-day is unsuited for solid tires, as it would make a very hard riding vehicle, and be very detrimental to the machinery. There is, however, on the market a machine or two with wheels of large diameter, taking solid tires and, with the proper springs, as easy riding and comfortable as a horse-drawn vehicle. The original cost of this particular solid tire is small, much less than the cost of the ordinary inner tube; it never punctures and will wear like the tire on the Goddard phaeton.

Pneumatic tires are a source of great expense and much trouble, and the life of the best is at most about one year. It is often less than half this, not to mention the numerous punctures and the expense of having the casings recovered, which is necessary, as a rule, at the end of four or five months' wear. The annual or more frequent replacement of the medium-sized pneumatic would mean at the most conservative estimate $200 per year. The car requiring such tires would run up a good expense account in repairs, and with the needed yearly overhauling, would amount to $300 or more and, in numerous instances of my own knowledge, twice that amount. If now the salary of the chauffeur, and cost of gasoline and oil, be added to this amount, some sort of an idea may be had regarding the expense of running the average automobile.

The Beauty of Simplicity.

Granting that the income of the physician would permit this expenditure, it remains a fact that just as much service can be had from the use of such a machine as is above recommended for at least 75 per cent. less money. Such cars as this have no friction clutches, live axles nor differential gears, are equipped with the most simplified driving mechanism, and when annoyances arise their adjustment is an easy matter and is done without incurring expense. These automobiles can be operated without a man, and actually require but little of the owner's time to keep them in running order. The hired man, in many instances, is almost as much of a nuisance

as the pneumatic tire. He remains long enough to learn the machine, then without notice quits his job, thus making it necessary for the physician to duplicate the experience.

The details of a simple machine are soon mastered, and perfect knowledge of its workmanship and familiarity with it in every way will enable one to tell almost without inspection just where the trouble lies when it does come, or render it possible to locate it without delay. There is, too, like driving your own horse, a great advantage in knowing your own machine. It runs better, will last longer, and the time actually devoted to it, furnishes very desirable and beneficial recreation.

A light car, air cooled, with solid tires, and rather under than over 20 horsepower, thoroughly understood, operated and looked after by the owner himself, will prove an economical, satisfactory and practical proposition, and lies within easy reach of every physician.

ONE ENTHUSIAST'S EXPERIENCE.

CHARLES H. DEWITT, M.D.
GLENWOOD, IOWA.

DURING the past two years I have learned many things about the automobile. At the time of purchase (March, 1904) I knew nothing about it—in fact, very little about any machinery. My first experience was with an 8-horsepower runabout (186), which I used about two months; I then concluded that I needed a car of more power, so changed to a 16-horsepower, two-cylinder machine (187), which I have used ever since.

I had much trouble and many discouragements in my early experience. One of my farmer friends used to say that he kept the harness on his mules night and day to prevent delay in hauling me in.

My car has two speeds, a forward and a reverse. Speed varies from 6 to 35 miles an hour. During the last year and a half the car has never been in the repair shop, all adjustments and repairs being made by my hired man, who has become an expert. I keep the machine in my barn, where all work is done on it. I formerly kept two teams. I now keep one family horse and very seldom resort to livery hire. In the first few months of my motoring slight troubles, such as a disconnected battery or a wire either from coil batteries, spark plug or governor, would make me entirely helpless, but now they are easily found and repaired in a few moments.

I am an enthusiast and believe that the extension of rural free delivery and better roads in consequence will not only make the automobile practical, but almost a necessity for the country doctor. I can go anywhere that I can go with a team, except in deep mud. In snow, except in drifts, that would greatly handicap a team, a motor car is entirely practical.

THE NEED OF A PHYSICIAN'S GOOD AUTO FOR FIVE HUNDRED DOLLARS.

EDWARD H. ABBOTT, M.D.
ELGIN, ILL.

ABOUT two years ago I purchased a small, water-cooled, single-cylinder runabout (213) with all the improvements and conveniences of that time. I wanted it to take the place of the horse-drawn vehicle in my work. I did not expect to be free from troubles in the new way of locomotion, since I had been closely watching some of my friends who had already taken the step. I immediately released my driver and disposed of my horses and so was compelled to trust entirely to the new vehicle.

My first troubles were tire trouble and, until I had disposed of all four tires (214) and second a set from another maker (215) my troubles continued. The second set of tires did good service throughout the remainder of the season and all through the succeeding season. I had but one puncture during the season of 1905. Notwithstanding my inexperience, I did all of my work until late in the season in the year 1904, excepting in the most stormy weather, when I used the street cars and a few livery rigs. During the winter I had the machinery overhauled and the body repainted and varnished. My machine cost $750 and the season's maintenance cost $175, including one complete set of tires, new tanks and other repairs.

Needs Eternal Vigilance to Keep Bolts Tight.

In 1905 I found various ways of improving the vehicle. I put in copper tanks of large capacity, a new carbureter and circulating pump. This brought my machine up to date again, and it served me fairly well throughout the summer season. Most of the troubles I had in these two years were: 1, With the poor quality of tires; 2, with the water circulatory apparatus; 3, with the insufficiency of valves; 4, minor troubles with shaking loose bolts, and with starting the motor. The tire troubles were overcome by disposing of the first set. With the water circulation I have always had more or less trouble. I have also found that the motor valves need frequent attention and regrinding and that eternal attention is required to keep every bolt and nut secure.

The Ideal Vehicle.

I believe that the doctor's ideal vehicle has not yet appeared, although several new models show a tendency in that direction. In my opinion, the ideal running gear will be large wheels like those of a carriage, with carriage tires; a double-cylinder two-cycle motor, air cooled, with automatic lubricator; a transmission without gears; a differential also without gears, with a fixed rear axle; more carrying room in the box; and a speed of from 15 to 25 miles an hour on level roads. The motor should be so arranged that each cylinder could be shut off or turned on at the will of the operator, thus making it possible to run with one cylinder, except where the roads are heavy or where grades are to be climbed. When such a vehicle can be produced, and at a moderate price, say $500, I believe that every doctor will consider such an outfit as necessary in his general work as his medicine case, his operating chair or table, or any of the essentials of his equipment for practice. I am satisfied with my experience in the use of the automobile and shall continue to be a devotee of its use.

THREE YEARS' EXPERIENCE IN NEW JERSEY.

D. EDGAR ROBERTS, M.D.
KEYPORT, N. J.

AUTOMOBILE experience had its beginning for me in 1903, when I bought a second-hand, curved dash runabout (182). I did not expect it to do all my work, but bought it to learn something about gasoline motors. It saved my horses some, and is doing fine service as a pleasure car still. My work is in town and country practice. The main roads are good, with some pretty stiff grades. The cross roads have some heavy sand and very steep hills. My drives vary from 10 to 50 miles daily.

What Is Needed Is a Physician's Auto.

After using the runabout a few months, my ideas of what I needed were formulated about as follows:

1. The tread must be the same as for carriage, which, in New Jersey, is 58 inches from center to center of tires on ground. For business purposes I would have nothing else.

2. The vehicle must carry two, have a top, plenty of space for satchels and must ride easily.

3. There must be high power and light weight, compatible with safety.

4. Ease of access to working parts and of removal of all parts is necessary.

5. The car must take all ordinary hills on high speed, as well as sandy roads, with ability to make 20 miles an hour.

After a long search I found a car (183) with three cylinders, weighing, with top, tool box and tanks full, 1,225 pounds, with 36-inch rear wheels. It filled all my requirements. I began using it in April, 1904, and used it both that year and the next with great satisfaction. My driver does all the work, as I have no time for that. When trouble comes, if not apparent, I generally make the diagnosis. Exclusive of the work at home, my expenses were about 10 cents a mile.

Mileage, about 4,500. I used horses a great deal, both from necessity and comfort. My car has been thoroughly overhauled at an expense of about $100, and it seems better than ever. It was a little expensive for me, needed much adjusting and the pneumatic tires were uncertain and expensive.

For several years I had been watching the development of a runabout whose peculiar mechanism interested me, and in January of this year bought one (184). It has high wheels, solid tires, plain bearings; is air cooled; has no gears; no differential, no live axle, no gaskets, no clutch. It rides comfortably as a carriage at same speed. It has two sets of sprockets and short chains high up out of mud and dust. It has given excellent satisfaction, does good work in mud and snow and on hills, but is not quite what I could wish for in sand. I still use two horses part of the time.

I feel very sure my troubles and expenses will both be reduced one-half on my last car. It is very easy and cleanly to care for. Each car does about 15 miles an hour on our roads. My horses do about 10 miles an hour. One will have more trouble and expense than the auto advertisements lead one to believe. Some manufacturers are very unaccommodating.

THE AUTO ON THE PACIFIC COAST.

H. A. L. RYFKOGEL, M.D.
SAN FRANCISCO.

I AM using my third automobile. The first was a light runabout (220), with a 3½-H. P. French motor on the rear axle. I drove this machine 20,000 miles in three years. Although I did more running around with it than I could have done with a pair of horses, the expense amounted to less than the care of one.

My present (221) is a 1200 lb. runabout with a two-cylinder opposed motor under the bonnet. I find it very much more satisfactory than a team. It is just as reliable, does away with the necessity of keeping a driver, can be left outside my office without attention, is no expense when not in use, can be used at a moment's notice, day or night and, of most importance, can get over ground so rapidly that it adds much time to the length of one's day.

The Terrible Repair Man.

There are some objections to the automobile which fortunately are overcome by its many advantages: 1. The rapacity and incompetence of many of the repair shops. 2. Trouble with the tires. If one is careful to select a competent mechanic to make repairs and then specify exactly what is to be done, the former difficulty can be avoided. The second question is purely a matter of luck.

On the whole I believe in the automobile for the physician but I should advise him not to buy a cheap machine nor one that is only in its experimental stage. If he does, the repairs will soon eat up the difference and he will not have had the satisfaction that comes with a well-made article.

THE COUNTRY DOCTOR AND THE AUTOMOBILE.

W. P. HARTFORD, M.D.
CASSVILLE, WIS.

NO class of men is so vitally interested in the automobile question as the country doctors, and it is a great mystery why some enterprising manufacturer has not built a machine for our special use. It costs more to keep tires in repair than all other bills combined. Transmission is a nightmare to the builder and user alike. Cooling, especially in the winter, is a problem that is of vital interest to the country doctor. The air-cooled motor appeals to him every time. He must have a car that will almost climb a tree and light enough so that he can pry it out of a ditch with a fence rail. It must be uncomplicated, as he is not a machinist, but from the very nature of his business he is a man of resources and quick to diagnose the trouble, but he must have a machine that will not break down. A broken plug or wire or bad adjustment of carbureter is quickly remedied after the trouble is located. Of all men (I won't except any, not even the trained mechanic) the country doctor will be the quickest to learn to locate and repair any minor ill such as constitute 95 per cent. of the motor failures. Exhaust and admission valves simply can not be made so that they will stay in good order.

The price—there is the rub. The country doctor is hard up. He won't own up to it, as the dear public won't employ the man they think is not successful, so he is obliged to put on a bold front, but when automobiles are cheaper, quicker and equally certain, he will quit horses.

Now, with a machine with the above trouble-making features eliminated, there will be left a car that will have only three points to look out for: Compression, which can be tested infallibly in a fraction of a minute (anyone who has swung the balance wheel nearly to the compression point and felt the live, springy elastic rebound, will recognize it instantly ever afterward); fuel supply, which is easily learned. The spark, which is usually to blame, is easy to test out. If these three are right, the engine will run. They are the heart, lungs and stomach of the machine. Of course, it will have attacks of indigestion, and I have sometimes suspected it of malingering, but always found some real cause for the illness.

An automobile with three or four three-part, two cycle cylinders without any transmission gears, would be a long stride ahead. The two cycle is very much cheaper than the four cycle; has about 1.8 as much power as the four cycle of the same weight; has only three moving parts, the piston, connecting rod and crank, none of them liable to get out of order; with three or four cylinders it can be slowed down to one hundred revolutions a minute; runs backward as well as forward; and with a jump spark can be reversed while running. If made with well-fitting pistons, it can be started some little time after it has been stopped by turning on the switch. Solid tires on large wheels would be an improvement on the pneumatic tire. There would be no punctures at any rate, and a solid tire on a large wheel would probably ride as easy as a pneumatic pumped up hard on a small wheel.

The country doctor who could buy an automobile for $500 that would go through anything and go sure every time, make 15 miles an hour and last ten years, would sell his horses and buy one to-morrow.

FACTORS IN SUCCESSFUL AUTOING.

WALTER RUPERT WEISER, M.D.
SPRINGFIELD, MASS.

EXPERIENCED physicians agree that the practicability of the automobile, as a vehicle for physicians' use, is no longer a problem to be solved, and that, with fair roads, a physician can do a large practice more expeditiously and with less expense.

Buy a Car Proved Good by Others' Experience.

The character of the roads, the type of machine used, and the operator, are all factors in the degree of success obtained. In a locality where six to eight inches of mud or snow are the rule during eight or nine months of each year, the pleasure of operating decreases, while the cost of maintenance increases. Again, many of my friends have not met with a full measure of success, because they have made their first experiment with a machine that was worn out by a previous owner, or one that was built to sell cheaper than a good substantial automobile can be sold. Finally, the man who forgets to lubricate his car, or who fails to replace a bolt or two when they have dropped out or runs through a pile of glass, instead of around it, will naturally have many more troubles to relate than the operator who occasionally has his car looked over and uses it as a piece of good machinery should be used.

My experience covers a period of six years, during which time I have owned ten machines of various types, and operated many others. With my last car (178), I covered nearly ten thousand miles at a cost, including fuel, oil, repairs to car and tires of $160. It is necessary to keep my car at a public

garage, so that for storage, washing and delivering the car I pay an additional $15 a month.

It is unwise to buy a new and untried type of car. They all look beautiful in the splendor of new paint and upholstering, and ride splendidly in the hands of the expert agent, when new, but when you are giving the machinery such work as is required by a physician in bad weather and bad roads the results are different.

Cars Are Made Better Now.

Each successive gasoline car I purchased was better than its predecessor, until now I have practically no troubles and my expenses are small by comparison with an equal mileage made with horses. This perhaps is due to the facts that automobiles are built better and that experience in operating saves many difficulties. My total mileage has been about seventy-five thousand miles, having spent several vacations in touring the New England and Middle states, besides continuous use for six years in a consulting practice covering a large territory. From the experience thus acquired I submit the following conclusions:

1. Electric cars are quiet, easily controlled, clean, and start without cranking, but they are heavy, due to excessive battery weight, the batteries require much attention, and are easily injured.

2. Steam cars are quiet, easily controlled and start without cranking, but the many things to watch and care for render it impossible for the operator to do or think of much else.

3. Gasoline engines have the disadvantage of starting with a crank, but an operator soon learns to manipulate the starting device and the trouble is forgotten in considering the many advantages gained by using this type of engine.

Annoyance Replaced by Satisfaction.

I run my car every day in all sorts of New England weather, and during 1905 my total outlay was less than one-fourth of my expenses during the last years' work with horses. To be ready in an instant when in a great hurry is a satisfaction only appreciated by those who have had the experience. To be called at night when your driver is out, or incapacitated, is one of the most annoying episodes in the practice of medicine. With a gasoline machine in the barn, you are off with the simple turn of a crank. Arriving at your destination there is no horse to tie and blanket, and if detained several hours on a cold night one feels relieved in that his horse is not out in the cold and storm. You will have more time with your books and your family, especially if your work is scattered, and your outdoor work will become a pleasure.

SIX YEARS' SUCCESS WITH ONE CAR.

H. C. MARTIN, M.D.
SPRINGFIELD, MASS.

SOMEWHAT analogous to chronic ulcerative phthisis is the history and life of my little wagon; it has coughed and coughed and coughed for nearly six years and it is still living and coughing.

When I purchased it, July 17, 1901, automobiles were not considered sufficiently reliable to supplant the horse as a method of transportation for the doctor, and comparatively few doctors were using them in their practice in this vicinity.

Since then have used it constantly in my practice with the exception of portions of the winter when the snow was too deep to navigate. The little three-wheeler (216) has traveled many miles more than 50,000, which record I dare say is equaled by few.

The Secret of Success.

I attribute my success to observing the following precautions: From one-half to three-quarters of an hour every morning is devoted to cleaning, oiling and thoroughly examining the whole wagon, tightening bolts, filling gasoline tank and oilers. Oil is cheaper than wagons. When a part begins to show wear I get a new part and keep it handy, and as soon as I feel the old one will not last much longer I put in the new one, not waiting for the old one to break on the road. A man doesn't wait till his horse loses all his shoes before having him shod. Why do differently with an automobile?

I know it is easier, better and more economical to use an automobile in practice than horses, provided the roads are half decent. But they must have care. If a man pays $800 to $2,000 for an equine equipment he has a man to look after it, and if that man is not working on that equipment all the time he is advised to look for other employment. Many a man pays $800 to $2,000 for an automobile and doesn't hire a man to care for it, nor care for it himself, except to pour in gasoline and oil. Then he tells his friends what a lot of trouble an automobile is. How inconsistent!

NOT A PARTICLE OF ENCOURAGEMENT.

STERLING GIBSON, M.D.
THOMSON, GA.

I TRIED most faithfully for 14 months to get some satisfaction out of my automobile (225) but words are too feeble to express my experience, for I can not give the country physician one particle of encouragement. My practice extends from 10 to 15 miles all around Thomson and we have fine roads, too.

I always keep two horses, but got my machine with a view of selling one or both, but found I would have to get the third horse if I kept trying to use the machine.

I am now getting some solid tires and am going to try it again when I havn't much to do, nevertheless it is a very dear luxury for I often had to carry a machinist along and in a small town it is always trouble to get an automobile repaired. Their place is in the city, as they are too much expense for a country physician. I find it less expense to keep two horses and a man to look after them than to use an automobile.

DOCTOR'S AUTOMOBILE ASSOCIATION OF AMERICA.

DAVID EDWARD HOAG, M.D.
NEW YORK.

AT present, manufacturers do not cater to the needs of the doctor. Their aim is to make and sell the large touring car, as the proportionate profit is greater. The manufacturers who make a high-grade runabout for doctors' use, do so only at a price nearly as great as the larger car. Not all doctors can afford two cars, so the result is, that much as a man may desire a large car for family use or for touring purposes, he is barred from possessing one on the grounds of expense—first cost, and later, maintenance. True, a man may possess a car with detachable tonneau, but even in that, there is something crude and inconvenient which does not appeal to the artistic conception of the average man, be he a layman or doctor. Then, too, the many petty annoyances of the average automobile, restrains the doctor from being quick to invest, much as he may desire one in other ways. I refer principally, to the inaccessibility of the machinery in many cars; the unwieldy and ofttimes unmanageable levers; the stubborn and undignified "cranking" of the gasoline motor; the dirt and smell of oil and gasoline when it becomes necessary to "fix things". It must be remembered that the doctor is not a sportsman; that is, he does not aim to be, while in attendance on professional duties. The enthusiastic automobilist who is out for pleasure, clad in his rubber armor or other motoring paraphernalia, does not mind to such an extent, dirt, noise and smell. He may even glory in it as an ear-mark of his devotion to the sport.

That the automobile has come to stay, is an undoubted question, and it is safe to predict, that as a conveyance in both city and country, its use will be prominent for many years to come.

A Doctors' Stock Company.

A small coterie of doctors, of whom I have been chosen as an official mouthpiece, have considered the advisability of taking steps to form an association to be known as the "Doctors' Automobile Association of America," the aims being largely that of that other organization, known as the "Automobile Association of America," namely, that of concerted influence on legislation which will promote good roads, the holding of

annual or semi-annual meetings, promoting social intercourse among automobilists, the establishment of a uniform system of rules and regulations governing the conduct of automobilists, the training of chauffeurs, etc. It is difficult to enumerate the benefits that might be derived from co-operation of this kind. The automobile industry, being still young, it seems reasonable to assume that to engage in the manufacture of the same, should hold out great inducements as a profitable enterprise. With this end in view, we have also considered the advisability of forming a stock company of doctors only, to embark in the manufacture of automobiles, particularly those automobiles adapted to doctors' use. In fact, we have gone so far as to prepare a prospectus and it has been our intention to send copies to every doctor in the states of New York, New Jersey and Connecticut. Our watchword is, "Automobiles for Doctors, by Doctors." It is not our intention to place any doctor under the slightest monetary obligation. What we want most at present, is the voice of the profession, its views, its opinions, and later, possibly, its hearty co-operation. This must be considered primarily as an investment, and secondly, to put upon the market an automobile which shall embody all the requirements of the doctor's automobile, as regards ease and safety of handling, speed, comfort, and at a price as low as manufacturing conditions will permit.

The Need of a Good Doctor's Car.

The circumstances that have gradually led up to placing this proposition before doctors, has been the absolute incompleteness of any small cars yet turned out by the manufacturers, as well as the extreme variation in price. Since it is a notorious fact that dealers do not encourage the manufacture and sale of the small car, and it is often cumbersome, both in bulk and price. Just as soon as the enterprise takes on some tangible form, efforts will be made to secure manufacturing facilities.

Among the other advantages to be derived from co-operation would be the establishment of garages at convenient locations in and about the territory referred to, and maintained under the auspices of the company. Stockholders would thus have the benefit of reliable care for their cars. The question of car maintenance would, in the aggregate, be reduced to a minimum, lessening the expense to the doctor by at least one-third, and at the same time showing the profit to the company.

This is briefly a synopsis of the plan we had in view. We should be very much pleased to hear from doctors in the different parts of the country, either approving or disapproving of the plan, with such suggestions as might prove of value.

49 West Thirty-third Street.

REPAIRMEN'S RUINOUS ROBBERY.

J. C. STINSON, M.D.
SAN FRANCISCO.

WHAT it costs to run an automobile depends largely on whom you have dealings with. My first car was a single cylinder runabout (222) and I really hate to tell you what it cost me. The more I think about it, the madder I get. I bought this car from a local agent Aug. 2, 1903, and ran it myself until February, 1904. My original investment was $983, including the price of a tonneau, lamps and horn.

Greedy Garage Grafters.

It was nothing but graft from the time I received the car until I got out of the clutches of this octopus agent. I was charged up with more than enough gasoline to run a four-cylinder car, and the agent always found some work to do on it. It was never kept clean, and the lamps never did shine, while the charges for repairs, replacements, etc., were excessive. In proportion this was a greater graft than an thing outside of the life insurance companies. I tried vainly to get some pleasure out of this car, but it was so poorly taken care of that I was stalled on the road a great number of times. My first bill of expense from Aug. 20 to Sept. 31, 1903, was $243.30.

I had a slight accident. I was let down by a street car running into my left hind wheel. I was going slowly and was not thrown out or in the least injured. The following charges were made by the agent: Going after car and bringing it to repair shop, work on rear axle, straightening pump handle, work on left front wheel and steering gear, and labor, $45.75; drayage on rig from repair shop to store, $5; express on wheels, $9.85; telegram to factory for parts, $1; one new steering knuckle, $12.50; two rear wheels, $50; three brass dust caps, $2.25. On showing the above charges to several capable, honest auto mechanics and other experts, I was informed that political grafting was nothing compared with this. The bills so far amounted to $1,226.30. My supply bill from Oct. 7 to 31 was $14.50. Repairs to Oct. 31, 1903, amounted to $51.45. Expenses from Oct. 31 to Nov. 30, $108.85; gasoline bill and storage to Dec. 1, $36; repairs, etc. to Dec. 29, $97.30; supply bill to Jan. 31, $14.

Thus, you see, I had a small single-cylinder car that cost me while it was in the hands of this agent $565, for four and one-half months' partial use; over $125 a month, some of which time it was in the shop. I afterward sold the car for $600, and I understood that the present owner is getting very good service out of it. If the above charges are not enough to make a man wild, I do not know what else would.

What Are Fair Running Expenses?

Now, what should be considered a fair running expense for such a single-cylinder car? I have carefully inquired into the matter at much trouble to myself, and averaging the opinions of practical auto men, I find that for a run of 35 miles a day, such as a physician would make in his calls, a single-cylinder car would use 3 gallons of gasoline and 3 pints of oil. It would take nine hours' time to cover this distance, allowing for stops, and this would use every bit of power in the machine. Total repairs, year in and year out, would amount to $15 a month; gasoline, $22.50; oil, $7.80; a set of tires complete last five or six months, $148; storage for such a car, $20 or less a month. Some physicians may want a chauffeur for such a car, but this does not appear necessary to me. A competent, reliable chauffeur can be obtained at $60 a month. Such a man can store this car for $5 to $10 a month and in other ways save you many expenses.

I bought my two-cylinder, 16-horsepower touring car (223) Jan. 23, 1904, and used it up to the time I bought my four-cylinder, 30-horsepower car (224), some months ago. To run the two-cylinder car, it cost me $1,102.42 for eleven months' expenses, or an average of about $106 a month.

The cost of running a two-cylinder car is not much more than a single one. For a 35-mile trip 4½ gallons of gasoline is required, making $33.75 a month for gasoline; $1.30 covers oil and $25 repairs. Tires last five months and cost $208 for a complete set. With stops for calls it takes a two-cylinder car eight hours to run 35 miles a day, and this uses the engines right to their limit. Storage is $20 to $25 a month. Any physician ought to readily run his own two-cylinder car.

Four Cylinders Most Satisfactory.

With the four-cylinder car, to run 35 miles a day, will consume 4 gallons of gasoline per month, while oil comes to $2.60. Repairs year in and year out, amount to $20 a month; storage costs $35 a month. Tires $252 for a set which will wear four to six months. A chauffeur will cost $75 a month. Reckoning all expenses, a four-cylinder car (including driver) should not cost more than $175 a month, including breakage, replacements and tire bills.

Horses are things of the past for the physician's use. I have fully made up mind that the four or more cylinder car is the one for the present and future. It is quiet, fast and fairly reliable; you do not often use all the power in it, you go quietly to your patient, with no noise or disturbance. This cannot be said of the single or two-cylinder cars, as they are all more or less noisy.

Advantages Over the Horse.—Dr. E. M. Hetherington, Kansas City, writes: 1. The auto saves from 25 to 40 per cent. of time in making calls. 2. It saves about the same per cent. in cost. 3. It saves much trouble and worry and it is more comfortable than a horse-drawn carriage. Garages I found exhorbitant. When a man has learned his machine and handles it carefully he will have little trouble with it. I would not exchange my automobile for the best team, outfit and coachman.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 DEARBORN AVENUE . . . . CHICAGO, ILL.

Cable Address . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance
[*For other information see second page following reading matter.*]

SATURDAY, APRIL 21, 1906.

THE EFFECTS OF SPASM IN SCLEROTIC ARTERIES.

To the trained finger palpation of the pulse discloses two conditions, the state of the circulation and the condition of the blood vessel, and it is of the highest importance that the two be differentiated. The former is an index of the action of the heart, while the latter may be due either to local influences or may be part of a more or less widespread disturbance. Blood pressure and vascular tension depend on the relation between the volume of blood and the energy with which it is propelled on the one hand and the state of the vessel on the other hand.

The vessel wall may be thickened as a result of either functional or organic change. That is, the muscular coat may be contracted in greater or lesser degree in response to various stimuli; or one or other tunic may be the seat of hyperplasia or degenerative change. For the first we have at command certain measures of prevention and relief, while the second, apart from its dependence on syphilis, is beyond the reach of therapeutic intervention. It is, accordingly, important to recognize the part played by each of these sets of conditions in the development of the symptoms in any given case.

Atheroma and arteriosclerosis, with or without calcareous degeneration, are the common causes of organic vascular thickening and are to be expected after the middle period of life, although occasionally they appear earlier. It should be borne in mind that vessels so affected may exhibit in addition, thickening from contraction of the muscular coat. Some of the cerebral manifestations observed in the presence of such associated conditions are described in a recent communication by Dr. William Russell.[1] For example, there may be sudden paralysis, hemiplegia, monoplegia, aphasia—without loss of consciousness. If the circulation through the contracted vessel is soon restored, spontaneously or therapeutically, perfect return of function will take place. Otherwise, the disturbance will be permanent. The result is in some measure dependent on the power of the left ventricle. If the action of the heart be feeble, the circulation may not be restored; while, on the other hand, if the heart's action be unduly strong, the diseased artery may be ruptured.

Among other symptoms attributable to spasm in sclerotic arteries are vague pains in the head, attacks of giddiness, restlessness, insomnia and mental excitement. In the presence of paralysis the condition must be differentiated from cerebral hemorrhage, thrombosis and embolism, and the diagnosis may be of exceeding difficulty. As has been pointed out, hemorrhage may actually take place as a result of rupture of a contracted sclerotic artery if the action of the heart be exaggerated, while a thickened blood vessel with narrowed lumen affords favorable conditions for the formation of a thrombus, particularly if the circulation be sluggish. Embolism is usually associated with valvular disease of the heart and can occur only when it is possible for a plug to be detached in some portion of the circulation and to be swept into the blood stream. Even then, the cerebral vessels are less likely to be the seat of obstruction than other larger vessels. The effects of the three conditions mentioned, namely, hemorrhage, thrombosis and embolism, are more likely to be permanent than those attending spasm in sclerotic arteries.

The prophylaxis, in the presence of a tendency to spasm of sclerotic arteries, consists in avoidance of the causes, among the most important of which are absorption of toxic matters from any source and deficient elimination on the part of the emunctories. The treatment comprises not alone the removal of these faulty conditions, but also the administration of vasodilators, with or without appropriate cardiants.

1. Practitioner, March, 1906, p. 306.

PROTECTION AGAINST DANGEROUS MEDICINES.

In our news columns last week announcement was made that the Committee on Public Health of the Massachusetts Legislature had reported in favor of a "patent medicine" bill, which evidently is a substitute for several bills previously introduced. This substitute bill contains an amendment which provides that unless the package contains more than two grains of opium, or more than one-quarter grain of morphin, or more than one-sixteenth grain of heroin, cocain, alpha-eucain or beta-eucain, or more than eight grains of chloral hydrate, in one fluid ounce" it is not necessary to mention on the label that these drugs are contained in the preparation.

As we understand it, practically the same principles are incorporated in an amendment to the national Pure Food Bill tentatively adopted, at the request of the proprietary medicine interests, by the Committee on Interstate and Foreign Commerce. These modifications are made, undoubtedly, with the best of intentions on the part of the members of the committees, as a compromise to satisfy the Proprietary Association of America.

We respectfully suggest, however, that a law carrying such provisions will not protect the public from that dangerous class of preparations against which it is directed. For instance, Kopp's Baby's Friend, Mrs. Winslow's Soothing Syrup, Bull's Cough Syrup, and analogous preparations containing opium or its deriva-

tives, can still keep up their deadly work. Some of these preparations may have to reduce the amount of the narcotic they contain, in which case all that will be required is an increase of the dose. It is the opiate in these preparations that sells them—that does the work. Take it away, or reduce its content to a point that it will have no effect, and there will be no demand for the preparation. If a medicine contains any habit-forming or dangerous drug there must be a sufficient quantity to produce a therapeutic effect. If it does not contain a sufficient quantity of the drug to produce this effect, then it is the acme of foolishness to put it in at all. On the other hand, if there is sufficient to do good there is sufficient to do harm. This can not be denied. Reduce the amount of the opiate in Chamberlain's Cough Syrup to the point where it will have no appreciable effect and it will no longer control the cough. Let a sufficient amount be retained to control the cough and it will certainly be enough to produce the habit or to kill if taken in a sufficiently large dose.

The proprietary medicine men realize that the people in certain states are sufficiently aroused to demand legislation, and so they bend all their efforts to make it so mild that it won't hurt them. They realize the seductiveness of the plea that there is no danger in small doses, and push this idea for all it is worth. But every physician knows that right here is where the danger lies. Drug habits are not formed by commencing with full doses. It is in the insidious small dose, gradually increased, either in time or in size, that the danger lurks. It is in the overdose taken accidentally or premeditatedly, without knowing the peril, that the danger lies.

There are occasions when it is wise to compromise and to take the proverbial half a loaf rather than no bread at all. But it is never justifiable to compromise with crime, and that is what will be done if the proposed amendments are allowed to be incorporated in a law. Better no legislation at all than that which legalizes a business that thrives on the moral and physical degradation of human beings and the slaughter of children.

If a layman should go to a drug store and ask for, say, a half-grain of morphin, the druggist would refuse to sell it until he had inquired into the use to which it would be put; but if the same layman should ask for a two-ounce bottle of a proprietary medicine containing the amount allowed by this proposed amendment, he would get it, although the medicine might be nothing but the morphin and simple elixir, or simply morphin and water. The same layman might be refused a half-dram of chloral hydrate, but he could buy an eight-ounce "proprietary" mixture containing more than a dram of the drug without question. A druggist in Chicago would be, and is, punished if he sells a layman half a grain of cocain; but, according to the above, he can sell it if it is in a "patent medicine," provided it is dissolved in an eight-ounce mixture, no matter what the mixture may be—simply water, possibly—and he would be justified in so doing by these proposed amendments. Thus the proposed amendment to the Pure Food Bill would make legal that which is illegal in many localities.

It must not be forgotten that, while it is comparatively easy to detect some of these drugs—morphin, for instance—it is often exceedingly difficult to determine quantitatively the amount present. Thus it would be hard to prove that a certain medicine contained more than the amount of the drug allowed by law.

We repeat: There should be no compromise with this crime. Better let matters go on as they are until the public is awakened a little more rather than adopt such a law as is now proposed in Massachusetts and in the amendment to the Pure Food Bill. If these dangerous drugs are to be allowed in patent medicines, then let the label tell.

THE TOXINS AND ANTITOXINS OF POISONOUS MUSHROOMS.

The most important of the poisonous fungi is *Amanita phalloides*—"deadly amanita." A hundred years ago Bulliard, the great French mycologist, named it "destroying angel." Its abundance, its superficial resemblance to edible mushrooms, its delicious taste, and its extreme toxicity—a third of the top of a small plant has killed a 12-year-old child—fully justify these characterizations.

At present our therapeutic measures are of no avail in the treatment of severe cases, and consequently scientific studies of the toxicologic properties of toadstools may give results of practical value. The recent study by Ford[1] of the poisons of the "deadly amanita" show (1) that they are of the nature of true toxins in that their action on the animal body becomes apparent after a period of latency or incubation; (2) they produce lesions similar to those of certain bacterial intoxications, and (3) they produce in animals on immunization specific antitoxins.

Right here attention may be called to the fact that the word toxin is being used in a loose manner likely to result in confusion of ideas. In a strict sense only relatively few poisons, microbic or otherwise, are true toxins. Strictly speaking, toxins are soluble poisonous products of bacterial, vegetable and animal origin of as yet unknown chemical nature, but resembling organic ferments in great sensitiveness to heat and other influences. The action of toxins in the susceptible animal body becomes apparent after a variable period of latency and in suitable animals they give rise under special conditions to specific antibodies, antitoxins that neutralize the respective toxins *in vivo* as well as *in vitro*. These characteristics sufficiently demarcate toxins from other poisonous substances of diverse origin, and physicians should not, as is now commonly the case, apply the word toxin indiscriminately to all the poisonous bodies concerned in infections and certain intoxications.

1. Jour. Infect. Dis., 1906, vol. iii, p. 191.

Returning to the toxins of *Amanita phalloides,* Ford succeeded in immunizing animals so that they were able to withstand multiples of fatal doses of phalloides extract and to yield a serum, 1 c.c. of which neutralized 10 times the fatal dose of the extract. The best known of the toxins of *Amanita phalloides* is the phallin of Kobert, which is a strong laking agent for red blood corpuscles. Immune serum was found to suspend this power, that is, to be strongly antihemolytic.

Whether or not sera of still greater strength and suitable for therapeutic purposes can be obtained from larger animals, like the horse, remains to be seen. In spite of the general knowledge now prevalent in regard to mushroom poisoning and of the differential characteristics of mushrooms, cases of such poisoning are bound to occur, the majority always from "deadly amanita." Consequently, there is a need for curative sera. The diagnosis is usually easy, and death, which is the case in from 60 to 100 per cent., usually occurs a few days after the actual poisoning, so that the natural conditions are favorable for specific serum treatment.

THE RELATIONS BETWEEN HUMAN AND BOVINE TUBERCULOSIS.

In 1898, Theobald Smith established two races or types of tubercle bacilli, namely a bovine and a human type. He pointed out that the differences demonstrated in the two types of bacilli indicated that the fear with which bovine tuberculosis was regarded at that time probably was unreasonably exaggerated.

In 1901 Koch startled sanitarians the world over by the announcement that in his opinion the bovine disease need not concern us in our struggle against human tuberculosis because there was a most radical distinction between the human and bovine types of the disease.

There followed a general re-investigation of the problem out of which two facts have emerged as definitely settled, namely: (1) The existence of two types of mammalian tubercle bacilli, the bovine and the human; and (2) the occasional occurrence of bovine bacilli in cases of human tuberculosis. How frequent invasion of human beings by bovine bacilli actually is can not be stated. Attention so far has been given principally to intestinal tuberculosis and Theobald Smith, in his last review of this subject,[1] believes that the ratio of cases of intestinal tuberculosis associated with bovine bacilli may be estimated roughly at from 20 to 40 per cent. Now intestinal tuberculosis is a relatively rare disease; not infrequently it becomes stationary; and it is encountered, especially when associated with the bovine bacillus, almost entirely in children under ten years of age. So far as we know now, phthisis and other forms of tuberculosis in the adult are practically always of human origin.

Assuming that these statements represent truthfully the actual present state of our knowledge concerning the relation between bovine and human tuberculosis, then there is no escape from the conclusion that bovine tuberculosis is a minor source of tuberculous infections as compared with the other and major source, the tuberculous human being.

The problem of reducing this minor source of tuberculosis to the minimum must be left in the hands of our boards of health and cattle bureaus. In this case the question of adjusting fairly the interests of public health and economic considerations is a delicate one. The fact that bovine tuberculosis, regardless of its relation to human infection, causes annual losses to cattle owners, may prove a powerful factor in the gradual elimination of bovine tuberculosis.

1. Amer. Jour. of Public Hygiene, 1906, vol. xiv, p. 516.

THE AUTOMOBILE FOR THE PHYSICIAN.

To no class is the development of the automobile of more importance than to physicians. How to reach their patients in the quickest, surest, easiest and cheapest manner is a practical problem to them. The doctor's buggy is a familiar object in every hamlet, village, town and city, and is often looked for with an anxiety verging on impatience by rich and poor alike. In such cases the horse has always been too slow; nowadays it is always too slow, especially for the ambitious or busy doctor. As the horse has been superseded by electricity in street car transportation, so must the faithful old steed step aside for the automobile, either now or very soon.

This week we give the opinions[1] of a large number of physicians who have had experience with the horseless vehicle. Our readers who were already in doubt whether or not to give up the horse and buggy for the newer, swifter (sometimes) conveyance will, we are afraid, remain in doubt when they finish. Certainly "doctors differ" in this instance. But, analyzing the opinion of all these physicians, we are forced to the conclusion that the automobile, while far from perfect, has reached that stage where it is a practical and an economical conveyance under certain conditions. To the physician who has some mechanical genius it is not only a welcome substitute for the horse, but it is a valuable means of recreation and diversion.

There are probably 50,000 physicians in the United States who are using some kind of conveyance and who either use automobiles or would do so if the automobile were in every way practical for their use. The first practical point—and the important one in most cases—is the price. While many are able to invest $1,000 or more, the majority can not pay more than $500 or $600. Hence, for the average, the doctor's car should not cost over $500. Undoubtedly the present profits are very large; they are so acknowledged by manufacturers themselves. A certain man who has a practical knowl-

1. THE NAMES OF THE AUTOMOBILES: For evident reasons the names of the automobiles and tires (and of some contributors who so requested) are not given, reference numbers being substituted. Readers who wish to have a number explained may write us, enclosing a self-addressed stamped envelope, and we will send the information.

edge of the subject affirms that nearly all the cars now in the market could be sold at a profit at two-thirds the present prices. If a standard make were once adopted, so that the various parts, including the woodwork, could be made in large quantities, the present prices could be almost cut in two and still a good profit would remain. There is no doubt whatever that a good practical physician's car can be made and sold for $500. But what is a practical physician's car?

First.—It must be durable; its life, with moderate repairs, should be five years, and yet there is hardly a car on the market at a moderate price that will last this long. There are too many weak points in the machinery, but they are points that can be made strong with only slight increase in weight or price, if the manufacturer would look more to future reputation for durability. Durability has not been striven for; immediate sale, with a year's good service, with little thought for the future, seems to be the principle on which most cars are made. This will change soon—must change.

Second.—Compact engine with power enough to climb any hill that a horse and buggy will climb. The speed is immaterial, fifteen miles is fast enough, twenty should be the limit of any machine. Heretofore there has been a craze for speed, and the sooner the craze is over the better. Speed is simply a question of mechanics, nothing else. What we need is a law forbidding the making of an automobile for ordinary road and street use that will go faster than twenty miles an hour. This is fast enough for all purposes. Durability and power has been sacrificed to speed.

Third.—Simplicity of construction, with all parts easily reached. This will enable almost any physician who can succeed as a practitioner to succeed as an autoist. The average man wants to care for his machine and to be able to understand its every detail. This means pleasure as well as saving of money, temper and time. Not only will simple mechanism be easily repaired when out of order, but the need of repair will be more rare.

Who is the manufacturer and what is the car that will meet the physician's demands?

THE MEDICAL EXAMINATION OF CHAUFFEURS.

The numerous accidents from motor cars call for special legal requirements as to those who handle them. The rigid rules which are applied to locomotive engineers might, it would appear, be very reasonably paralleled by somewhat similar requirements as to the qualifications of chauffeurs who run fast automobiles. The locomotive engineer runs his locomotive on an exclusive and well-protected track. The motor car operator runs often at equal speed along a public road utilized by vehicles of every kind and with no protections at the crossings. It would be only fair, therefore, that his special senses and general physical condition should be required to be in as good a state as those of the locomotive engineer. While the possible results of accidents are less serious in the case of the chauffeur, the chances of them are certainly more numerous. If an automobilist is out of health, nervously weak, defective in sight and hearing, or under the influence of drugs or stimulants, he is not a safe man to run an automobile. The proposition which has been made in France to require a medical examination and certificate as an essential condition for licensing chauffeurs seems an eminently reasonable one. Considering the amount that has been said and acted on as regards the qualifications of pilots and engine drivers, a little attention might well be given to the qualifications of those who, in a minor way perhaps, are now freely assuming like responsibilities.

A PECULIAR TYPHOID SEQUEL.

A lay journal, basing its statements on some alleged statistics, says that when a bachelor is carried through an attack of typhoid fever under the care of a trained nurse the chances are two to three that he will make a proposition of marriage to her during his convalescence. It says further that if a bachelor is nursed through any illness the chances are one in six that he will make a proposal of marriage to his nurse, and if this rule fails the inference is that the nurse is aged or exceptionally plain. The trained nurse, it says, who has been in the business over ten years is a rarity. We are not advised as to the number of happy marriages thus brought about, but it might be in a certain way a salutary process in weeding out the sentimentally inclined trained nurses and preventing overcrowding of the occupation. The risks appear to be unevenly divided. The woman who takes care of a man during convalescence has a pretty fair chance to estimate his weak points properly, while the other party, aside from his possible mental disability due to the effect of his disease, has comparatively limited opportunities.

UNGRATUITOUS SERVICES TO FELLOW PHYSICIANS.

A recent lawsuit in which a prominent physician was the plaintiff and the estate of another prominent physician the defendant has excited much comment. The suit was for professional services from one physician to another and, we are pleased to say, was almost unique. The estate is said to be amply able to meet the bill, and in that case it was most unfortunate that the suit was allowed to be instituted, whatever one may think of the policy or motive that prompted the action. The result, favorable or otherwise, is of no benefit to the plaintiff. The testimony of some of the witnesses was certainly remarkable, if correctly reported. Physicians are reported as saying that they usually charged their brother physicians for professional services. One is said to have asserted that he never even heard of a custom in accordance with which one physician would not charge another! The proceeding as a whole, according to the news reports, gives evidence of a lack of true professional courtesy. We agree with the New York *Sun* that there are probably very few physicians who would have the hardihood to go into court for recovery in such cases. The same paper is complimentary and also just to the profession when it says that "there are very few physicians who would care to do so."

THE CALIFORNIA HORROR.

Several thousand copies of this issue of THE JOURNAL had been printed before information reached us of the awful results from the combination of earthquake and fire in California, especially in San Francisco. We have been trying to reach San Francisco by telegram, but have not been able thus far to do so. The newspapers have already recorded the deaths of two physicians, Dr. Stinson and Dr. Kelley. The Medical Society of the State of California was to have been in session on the 17th, 18th and 19th. While many of the members may have been in hotels that were more or less wrecked by the earthquake, it is hoped that all were able to escape. We fear that the Dr. Stinson mentioned in the newspapers may be Dr. J. C. Stinson, who has an article on page 1207 of this issue. The Dr. Kelley is probably Dr. Edwin Arthur Kelley, of the Agnews State Hospital. Our sympathies are extended to the people who are passing through this awful ordeal, and especially to the members of our profession in San Francisco. Further, we believe that the profession of the whole country will willingly extend more than sympathy if the slightest necessity arises.

Medical News

ALABAMA.

Resolutions Adopted.—The Jefferson County Medical Society, at a special meeting held in Birmingham, March 26, adopted resolutions testifying in a fitting manner to the high esteem in which the late Dr. John C. Le Grande was held by his professional associates.

Commencement.—The twelfth annual commencement exercises of Birmingham Medical College were held March 29. Rev. S. B. Culver delivered the annual address to the graduating class, in which he paid a tribute to the late Dr. John C. Le Grande, for many years secretary of the college. Degrees were conferred on a class of eight by Dr. Benjamin L. Wyman.

CONNECTICUT.

Communicable Diseases.—The smallpox situation in Putnam is reported to be serious.——The Plantsville, South Center and Middlesex schools, Southington, have been closed on account of the prevalence of scarlet fever, diphtheria and measles.

Health Board Moves Office.—The office of the State Board of Health, which, since the organization of that body has been located at the residence of the late Dr. Charles A. Lindsley, New Haven, was moved March 31 to Hartford, where it will be located henceforth.

Personal.—Dr. S. Burden Overlock, Pomfret, has been appointed a member of the State Board of Health, succeeding Dr. Joseph H. Townsend, New Haven, who became secretary of the board on the death of Dr. Charles A. Lindsley.——The International Congress of Physiotherapy, Liege, Belgium, has awarded a diploma of honor to Dr. Clarence E. Skinner, New Haven, for his book on the "Therapeutics of Dry Hot Air."

Annual Meeting.—At the annual meeting of the Hartford County Medical Association, April 3, the following officers were elected: President, Dr. Frederic S. Crossfield, Hartford; vice-president, Dr. Edward G. Fox, Wethersfield; clerk, Dr. Edward R. Lampson, Hartford; councilor, Dr. George R. Shepard, Hartford; delegates, Drs. Everett J. McKnight, Hartford; Ansel G. Cook, Hartford; George W. Lawrence, East Berlin; John B. Boucher, Hartford, and Kenneth E. Kellogg, New Britain, and censors, Drs. Robert M. Clark, New Britain; Oliver C. Smith, Hartford, and Thomas F. Kane, Hartford.

DELAWARE.

Will Prosecute Delinquents.—The board of health of Dover has issued a warning to local physicians that hereafter prosecution will follow the neglect promptly to report to the board all cases of infectious or contagious diseases.

Personal.—Drs. Napoleon B. Morrison, Thomas D. Cook, Haven B. Patton and George R. Faulk have been elected city vaccine physicians for Wilmington.——Dr. George W. K. Forrest, Wilmington, was severely hurt by being thrown from his carriage.

Wilmington Health.—The annual report of the local board of health of Wilmington shows a death rate for 1905 of 15.16 per 1,000. No smallpox reported during the year. The number of cases of diphtheria was cut in half as compared with 1904. There was a notable increase in scarlet fever, but without any increase in the deaths. Three times as many cases of typhoid fever were reported during the year, but with fewer deaths than in the previous year. Tuberculosis caused 152 deaths, and the board of health suggests that this disease be added to the list of diseases to be reported.

GEORGIA.

Senior Student Dies.—T. E. Lenier, a member of the senior class of the Atlanta School of Medicine, died at the Presbyterian Hospital, Atlanta, March 28.

Lay Cornerstone of College.—The cornerstone for the new building of the Atlanta College of Physicians and Surgeons was laid with appropriate ceremonies, April 6.

Donations to College.—Andrew Carnegie has donated $10,000, and Dr. A. W. Calhoun, Atlanta, $10,000, to the building fund of the Atlanta College of Physicians and Surgeons. The remaining $80,000 was subscribed by the faculty and citizens of Atlanta. The faculty and the board of trustees have decided to establish an Andrew Carnegie laboratory of pathology and an A. W. Calhoun chair of ophthalmology.

ILLINOIS.

Personal.—Dr. George A. Wash, Palmyra, was operated on April 7 in St. Anthony's Hospital, St. Louis, for appendicitis and is making satisfactory progress toward recovery.——Dr. William J. Huff, Mode, has been adjudged insane and committed to the Illinois Central Hospital for the Insane, Jacksonville.——Dr. and Mrs. William R. Parkes, Evanston, are visiting in Los Angeles, Cal.

Brainard District Society Meets.—At the thirtieth annual meeting of the Brainard District Medical Society, held in Lincoln, April 13, the principal address was given by Dr. J. N. McCormack, chairman of the Committee on Medical Organization of the American Medical Association. Dr. William E. Guthrie, Bloomington, was elected president, and Clinton was selected as the next place of meeting.

Anti-Tuberculosis Work in Peoria.—Through the efforts of the Peoria Association for the Prevention of Tuberculosis, an ordinance was passed by the city council, which became effective March 20, providing for the registration, disinfection or placarding of premises occupied by consumptives. The council also has appropriated $50 a month for a tuberculosis visiting nurse, who began her work April 12.

Society's Semi-Centennial.—The Jersey County Medical Society on April 4 celebrated the semi-centennial anniversary of its organization with a banquet. The society was organized April 4, 1856, at the office of Dr. White in Jerseyville. Dr. E. A. D'Arcy was first president and Dr. A. S. Brewster the first secretary and treasurer. Dr. Augustus K. Van Horne, Jerseyville, is the only living charter member of the organization.

Old-Time Violator in the Toils.—James M. Ferdon, better known to the public as "Brother Paul," or the "Great Paul," who has been engaging in the itinerant vending of drugs and illegal practice of medicine in various parts of the country, was arrested April 6, at Chicago, at the instance of the Illinois State Board of Health, and was taken to Freeport, where he is now incarcerated in the county jail. Ferdon was at Freeport in August, 1905, engaging in the sale of his so-called "Quaker remedies" and practicing medicine in violation of the statutes. Suit was brought against him at the instance of the State Board of Health and several judgments were obtained against him both as an itinerant vendor and for practicing medicine, the fines amounting to about $1,700. When mittimuses were issued Ferdon removed to Iowa, and since that time has been doing business in several western states. He returned to Chicago early in April and had made plans to take up his business at Rockford, when the state's attorney of Stephenson County ascertained his whereabouts. Ferdon was apprehended in his rooms at the Kaiserhof Hotel just as he was making plans to leave the city.

Chicago.

Deaths of the Week.—During the week ended April 14, 621 deaths were reported, equivalent to an annual death rate of 15.80 per 1,000. Pneumonia caused 133 deaths; consumption, 70; heart disease, 56; Bright's disease and violence, including suicide, each 41; scarlet fever, 17; diphtheria, 10, and whooping cough, 7.

Twice Fined in Two Weeks for Selling Cocain.—On April 13, for the second time within two weeks, A. Monaco, a druggist at Polk and Clark Streets, was fined $100 for selling cocain without a physician's prescription. A negro accused of buying cocain in Monaco's drug store for boys under age, was fined $100 for disorderly conduct.

Bogus Vaccination Certificates.—Two cases of smallpox have been discovered in the Brown school. It is reported that several hundred children attending the school have been exposed to smallpox through false vaccination certificates given to children who had not been successfully vaccinated. The health department is making a searching investigation into the matter.

Reduced Death Rate.—For the week ended April 14, 39 fewer deaths were reported than for the previous week, representing a decrease of nearly 6 per cent. in the annual rate. Almost all the important causes of death, and especially nephritis, bronchitis, cancer, consumption and typhoid fever, show a reduction in mortality. The mortality of the infectious diseases of childhood, diphtheria, scarlet fever and whooping cough, increased.

Comparative Mortality.—The statement of mortality for the week ended April 7 shows 78 more deaths than for the previous week and .148 more than reported in the corresponding week of 1905. The increase in the annual death rate is equivalent to 13.5 and 25.3 per cent., respectively. There was an abnormal increase in the deaths of those over 60 years of age. Pneumonia showed the highest figures of the season, 135, consumption following with 85 deaths.

Personal.—Dr. A. I. Bouffleur is visiting in California, and on March 28 addressed the Long Beach Medical Society on "Drainage, Surgical and Medical."——Dr. Max Reichmann has been appointed radiographer to the Alexian Brothers' Hospital. ——Dr. and Mrs. Lester Curtis sailed for Europe, April 14.—— Dr. and Mrs. C. Pruyn, Springfield, are taking a trip to Mexico.——Drs. Hugh T. Patrick and Henry Gradle have gone to Lisbon as delegates from the Northwestern University Medical School to the International Medical Congress.

INDIANA.

Free Dispensary Opened.—Hope Hospital, Fort Wayne, opened a dispensary for the free treatment of the poor, March 25. The dispensary is in charge of the staff of the hospital.

Physicians' Club Organized.—The physicians of Elwood organized the Elwood Physicians' Club, March 30, and elected the following officers: President, Dr. Tilmund Q. Armfield; vice-president, Dr. John Q. Garner, and secretary and treasurer, Dr. Edward L. Wiggins.

Vanderburg County Election.—At the annual meeting of the Vanderburg County Medical Society, held in Evansville, March 27, the following officers were elected: President, Dr. John N. Baughman; vice-president, Dr. Marcus Ravdin; secretary and treasurer, Dr. William R. Davidson, and censor, Dr. George W. Varner, all of Evansville.

Resignations from Staff.—Owing to the recent change in the management of the Deaconess Hospital, Evansville, the following members of the medical staff have resigned: Drs. George P. Hodson, Joseph C. McClurkin, Philip Warter, Weller S. Pritchett, Henry F. McCool, William E. McCool, A. J. Knapp, Charles W. Hartloff, Jacob H. Kerth, Benoni S. Rose and Thomas Macer.

Epidemic Diseases.—The Carnegie library and Greensburg high and common schools have been closed by the board of health on account of the rapid spread of scarlet fever.—— Scarlet fever is far in the lead among communicable diseases. In Indianapolis 72 cases were reported in March, as compared with 61 in February.——An epidemic of scarlet fever is feared in Greenfield.——Dr. John N. Hurty, secretary of the State Board of Health, reports 6 cases of smallpox in Denver and 40 or more exposures to the disease.

Personal.—Dr. George W. McCaskey, Fort Wayne, goes abroad for a month.——Dr. Joseph W. Bowlby, Shelbyville, is seriously ill with cerebral hemorrhage.——The residence of Dr. John H. Hayden, Bethel, was totally destroyed by fire, March 20.——Dr. George D. Kahlo, Indianapolis, will become medical superintendent of the French Lick Springs Hotel, May 1.—— Dr. Job O. Ogburn, Green Hill, has been seriously ill with pneumonia, but is now improving. ——Dr. George D. Brannan, Crown Point, who has been seriously ill, is now convalescent. ——Dr. George Cassell, Hartford City, is seriously ill with septicemia.

New Medical Staff.—At a meeting held March 26 to elect a staff for the Fort Wayne Lutheran Hospital, Dr. Herman A. Duemling was appointed chief of staff; Dr. Henry G. Merz, chairman of the medical board; Dr. Eric A. Crull, secretary, and the following received staff appointments: Drs. George L. Greenawalt, Martin F. Schick, Charles E. Barnett, W. Wynn Barnett, Henry Ranke, Samuel H. Havice, Arthur L. Mikesell, Gustave G. Brudi, New Haven; Elmer E. Morgan, Samuel D. Sledd, Alpheus P. Buchman, Hiram Van Sweringen, George B. M. Bower, Charles R. Dancer, Henry O. Bruggeman, Adam L. Schneider and W. W. Carey.

Resignations from Faculty.—Dr. John F. Barnhill, clinical professor of diseases of the ear, nose and throat; Dr. E. O. Little, director of the physiologic laboratory and instructor in physiology; Dr. Frank F. Hutchins, assistant professor of nervous and mental diseases; Dr. Goethe Link, demonstrator in the anatomic laboratory; Dr. William H. Foreman, instructor in materia medica and therapeutics; Dr. Allison Maxwell, professor of practice of medicine; Dr. Robert O. Alexander, professor of pharmacology; Dr. Harvey A. Moore, clinical lecturer on genitourinary surgery, and Dr. Walter S. Given, lecturer on anatomy, have resigned from the faculty of the Medical College of Indiana, Indianapolis.

IOWA.

Complaining Witness Did Not Appear.—"Dr." Shipley, Madrid, who was arrested April 4, charged with practicing medicine without a license, appeared for trial April 9, and was discharged, as the complaining witness failed to appear.

Personal.—Dr. E. A. Bare, Ames, was attacked in his office building, March 24, stabbed and robbed of his pocketbook and watch.——Dr. Alfred Watkins, Des Moines, has returned from California.——Dr. Charles A. Delander, Des Moines, is critically ill with rheumatic fever.

Equal Rights.—Dr. Henry Young, state senator, presented an amendment to the bill authorizing cities of more than 12,000 population to build hospitals, requiring officials of hospitals to give an equal standing in such institutions to physicians of all schools of medicine.

Chiropractic Goes to Jail.—"Dr." D. D. Palmer, Davenport, discoverer and developer of "chiropractic," was committed to the county jail March 28, to serve out the sentence of 105 days' imprisonment imposed on him for practicing medicine without a license. Dr. Palmer could have been released after fifteen days' imprisonment on payment of a fine of $350, but decided to serve out his sentence and presumably pose as a martyr.

KENTUCKY.

Fire Loss.—The residence of Dr. A. C. Hagans, Langley, was destroyed by fire, March 26. No insurance was carried.

Meningitis Epidemic.—It is reported that cerebrospinal meningitis is epidemic in the vicinity of Alexandria. Out of one family of eight it is reported that three are dead and four are hopelessly ll with the disease Two other deaths have been reported.

Personal.—Dr. John Price, Louisville, has returned from Vienna and will become an interne in a Philadelphia hospital the last of this month.——Dr. D. F. Reeder, Paducah, sails for Panama March 30.——Dr. Samuel H. Garvin, Louisville, celebrated the twenty-ninth anniversary of his election as jail physician, April 2.——Dr. L. Edwin Young, Paducah, has been elected physician of McCracken County, succeeding Dr. John W. Pendley.

Academy of Medicine Incorporated.—The Academy of Medicine of Jefferson County, Louisville, filed articles of incorporation April 3, with a capital stock of $20,000. The object of the organization is the fraternization and broadening of local practitioners. The following are the charter members: Drs. Ap Morgan Vance, William Bailey, L. S. McMurtry, W. H. Wathen, A. M. Cartledge, John T. Moran, C. G. Lucas, S. J. Meyers, L. Frank and John G. Cecil.

Trustees Vindicated.—For the last year and a half there has been a determined attempt to remove from office as trustees to Speers Hospital, Dayton, for alleged extravagance and mismanagement, Drs. James O. Jenkins and John L. Phythian, Newport, and Dr. W. E. Senour, Bellevue. Ouster proceedings were instituted by taxpayers and three times the case has gone to the Court of Appeals, and each time the phy-

sicians have won. The last trial before Special Judge W. B. Moody will probably end the matter for in his decision the judge paid a well-deserved compliment to the physicians for the splendid manner in which their onerous duties, without compensation, had been performed. The costs of the prosecution will amount to nearly $2,000.

MAINE.

Measles Epidemic.—Measles is reported as epidemic all over the state. Rural schools, school gatherings and public meetings are being deferred on this account.

Meeting Deferred.—The Maine Medical Association meeting will be held in Portland, June 13-15, instead of June 6-8, as formerly announced, in order to avoid conflict with the meeting of the American Medical Association at Boston.

Personal.—Dr. George H. Turner, Jr., Portland, has been appointed surgeon in the Maine Naval Reserves.——Dr. George L. Hilton, Bangor, has been elected a member of the local board of health, vice Dr. Harris J. Milligan, made city physician.

State Board Meeting.—At the annual meeting of the State Board of Health, April 2, Dr. Charles D. Smith, Portland, was unanimously re-elected president. The standing committees of the year were appointed and the secretary reported verbally the work of the board in stamping out smallpox.

Hospital Patients Should Pay When Possible.—At a recent meeting of the Penobscot County Medical Society resolutions were adopted embodying the idea that the public hospitals should make charge for services of physicians and surgeons to those who can afford to pay, that the hospital might be compensated for the service.

MARYLAND.

Smallpox.—Two cases of smallpox were reported at Cumberland on April 9.

Hospital Incorporated.—Articles of incorporation have been filed by the Emergency Hospital, Easton.

County Society Election.—The Somerset County Medical Society held its regular meeting April 6 and elected Dr. Charles W. Wainwright, Princess Anne, president, and Dr. Ralph L. Hoyt, Oriole, secretary-treasurer.

Baltimore.

Personal.—Dr. Summerfield D. Bond has been appointed chief medical examiner of the Baltimore & Ohio System.

Gift for Hospital.—The trustees of Johns Hopkins Hospital have accepted a gift of $30,000 from Miss Helen F. Wilmer, to be used in the erection of a nurses' home in connection with the institution.

Early Days of Johns Hopkins.—On April 12 Mr. Daniel Gilman, ex-president of Johns Hopkins University, spoke before the Johns Hopkins Hospital Historical Club on "Early Days of the Johns Hopkins Medical School," and Dr. Howard A. Kelly spoke on "The First Medical Illustrations."

Society Discusses Variola.—The Allegany Medical Society, at its meeting in Cumberland, April 3, discussed the early diagnosis and treatment of variola. The society is reported to be in a flourishing condition and comprises in its membership almost all of the physicians of the county.

Eye, Ear and Throat Hospital Report.—The report of the Baltimore Eye, Ear and Throat Charity Hospital for 1905 shows that during the year 5,677 patients were treated, 5,590 of whom were charity patients. The total number of operations performed was 1,674. The number of patients increased 400 during the year, and the number of visits in the dispensary was nearly 5,000 greater than during the previous year.

Staff Changes at Infirmary.—The following changes will take place shortly at the Union Protestant Infirmary: Dr. Hugh H. Trout will retire as resident physician and will go to Vienna; Drs. George Tyler and Robert Nelson will also retire; Dr. Theodore F. Riggs, who has been a member of the resident staff, will succeed Dr. Trout. The following will be added to the staff: Drs. John Tarr, Baltimore; Sterry, New Orleans; Bell, Staunton, Va., and Dr. Wroth of Baltimore.

Health of the Week.—The death rate for the week ended April 14 was 21.53 per 1,000. Pneumonia was again in the lead with 29 deaths, to consumption, 24. It is interesting to note the variability without apparent cause of the former in the last several weeks, sometimes running far ahead of consumption and again falling much behind it. The large number of deaths due to violence was noticeable: Accidents, 12; suicides, 5, and homicides, 2. One case of smallpox was reported during the week.

Personal.—Dr. and Mrs. H. Barton Jacobs sailed for Europe, April 11.——Dr. A. R. L. Dohme has purchased the estate of 22 acres in the northern suburbs, formerly the country residence of Secretary of the Navy Bonaparte, and will reside there.——Dr. William S. Baer, chief of the orthopedic department of the Johns Hopkins University, was operated on for appendicitis at the Union Protestant Infirmary, April 8.——Dr. William H. Baltzell, who has been abroad for the last two years, is now in Paris and will not return to America at present.——Dr. Roland B. Whitridge is in Paris.

MISSOURI.

Health Department Appointments.—Mayor Wells of St. Louis has nominated Dr. H. Wheeler Bond, a member of the board of health, for health commissioner, to succeed Dr. Charles A. Snodgrass, deceased.

Symposium on Abortion.—The meeting of the St. Louis Medical Society of Missouri, April 21, will discuss criminal abortion. The subject will be dealt with from the medical standpoint by Dr. J. M. Grant; from the moral standpoint by Rev. James Hillem, and from the legal standpoint by Circuit Attorney A. N. Sager. This meeting is expected to be the beginning of a relentless campaign against abortionists of the city.

Memorial Services for Dr. Snodgrass.—Exercises in memory of the late Dr. Charles A. Snodgrass, health commissioner, were held by the St. Louis Medical Society, April 15. Dr. George Homan presided, and addresses were delivered by Dr. Homan, the mayor of St. Louis, Dr. W. G. Moore, Hon. Henry T. Kend, president of the Civic League; Dr. W. J. Miller, president of the Eclectic Medical Society, and John H. Matthews, of the board of health. At the close of the addresses a memorial to Dr. Snodgrass, prepared by a committee, was read by Dr. Sendebing and adopted by a rising vote. A memorial presented by Dr. Fred J. Taussig on behalf of the Medical Alumni Association of Washington University was also read and adopted.

NEW JERSEY.

Warning About an Agent.—In THE JOURNAL last week subscribers and members were cautioned against paying any money to Stein Josephs for the American Medical Association. When we last received information, his field of operations was in New Jersey. The Association is anxious to learn his whereabouts and will be glad to assist in his prosecution.

NEW YORK.

Ask for Milk Ordinance.—The physicians of Niagara Falls have petitioned the board of health asking that several changes be made in the sanitary code in regard to the distribution of milk in that city.

Dinner to Dr. Goffe.—Dr. J. Riddle Goffe, New York City, recently read a paper before the Buffalo Academy of Medicine on "The Etiology and Treatment of Cystocele." Before the meeting a dinner was given in his honor by Dr. Matthew D. Mann.

Bills Passed by the Senate.—Senator Saxe's bill authorizing New York City to establish and maintain a seaside park for the poor sick and convalescents was passed in the shape the New York City administration desired. The management of the new park will be under the control of the park board instead of the health department.

Antinarcotic Bill Reported.—This bill has been amended so as to practically exempt stocks of drugs now on hand, and to omit the provision that the analysis of the state chemist shall be presumptive evidence in criminal prosecution against a dealer. The bill would compel the labeling of all "patent medicines" and compounds containing more than a certain percentage of habit-forming drugs.

Higher Medical Standards.—There is now a bill called assembly bill No. 1715, which has for its purpose the exaction of a higher standard of education for all medical schools in the state and the establishment of one board of medical examiners, nine in number, in place of the board of seven each from each of the three schools of medicine. This bill would require colleges of osteopathy to exact a standard of preliminary education as high as that required by the regular colleges of medicine. It would also require students to attend sessions of nine months each in four calendar years. Power for the revocation of license of great scope would be vested in the examiners by the bill.

Personal.—Dr. W. F. Potter, Buffalo, has been appointed by Governor Higgins as a delegate to represent New York at the second annual conference of the Council on Medical Education of the American Medical Association, to be held in Chicago, May 12.——Dr. E. V. Stoddard, Rochester, was elected president, and Dr. Stephen Smith, New York City, vice-president, of the State Board of Charities for the ensuing year.——Dr. Horace M. Edmonds, Tonawanda, was reappointed health commissioner.——Dr. S. L. Higgins, Jr., physician at the Manhattan State Hospital, New York City, has been appointed assistant surgeon at the New York State Soldiers' Home Hospital, vice Dr. Laurance J. Gerold, deceased.

The Stevens-Wainwright Bill.—The New York State General Committee for Safeguarding the Sale of Narcotics has sent a letter to the physicians of New York State inclosing a booklet entitled "Has the Public a Right to Know"? containing the text of the Stevens-Wainwright bill now pending in Albany for the labeling of medicinal preparations which contain alcohol and certain other narcotic or potent drugs so as to disclose the presence and percentage of such ingredients. It is urged in the name of the poor and the sick in whose behalf this bill is being pressed, that every physician write to his senator and assemblyman urging the passage of the measure and also that he interest any influential friends and urge them to do the same. It is said that if the bill does not pass it will be for lack of public interest and demand for it, and it is impossible to bring facts before the public through the press, as it is silent on the question, owing to its advertising interests, excepting in a few instances.

Buffalo.

Restrict Sale of Poisons.—Because of the large number of suicides by carbolic acid, Health Commissioner Greene has prepared an ordinance restricting the sale of poisons, particularly carbolic acid and cocain.

Personal.—Dr. John H. Pryor, formerly superintendent of the New York State Hospital for Incipient Tuberculosis, has returned to Buffalo and resumed practice.——Dr. Charles G. Stockton has sailed for Europe.——Dr. Matthew D. Mann has returned from a visit to Jamaica.

Ordinance to License Criminals.—An ordinance is proposed by the Buffalo council which forbids clairvoyance, fortune telling, soothsaying, magic or sorcery without a license. It empowers the mayor to issue licenses to persons engaged in this "criminal business" who are of good moral character at a fee of $300 per year. It forbids the conduct of more than one place of business under one license and provides penalties of from $10 to $100 for its violation.

Tuberculosis Propaganda.—The tenement and tuberculosis committee of the Charity Organization Society has been reorganized and the tuberculosis section of the old committee has organized a new committee on tuberculosis, whose special work will be to spread the knowledge in destitute sections of the city that the disease is both curable and preventable. The following medical men will comprise this committee: Drs. John H. Pryor, Peter W. Van Peyma, De Lancey Rochester, De Witt H. Sherman, Irving P. Lyon, Julius Ullman and W. Harry Glenny.

New York City.

Bequest to St. Luke's.—Mrs. Sarah E. Sands has bequeathed $15,000 to St. Luke's Hospital. Three beds will be endowed in memory of her husband.

Hospital Ship Arrives.—The cruiser *Pennsylvania*, which is being used temporarily as a hospital ship, arrived from Guantanamo, Cuba, having on board the sick sailors and marines from the Atlantic fleet now in the Caribbean Sea. These men will be transfered to New York hospitals.

Tabulation of Sudden Deaths.—For the first time in the history of the coroner's office a complete list of the sudden deaths for the month has been issued. During March there were 546 cases of sudden death; 361 died from natural causes and 185 from burns, accidents and suicide.

Milk Below Standard.—Five dealers have been convicted of selling inferior milk. In one instance the milk was 32 per cent. below the required standard. The cases were brought into court by the inspectors, who based their complaints on samples taken from the milk offered for sale.

More Smallpox Imported.—The Hamburg-American liner *Amerika*, which arrived April 7, brought the second case of smallpox that has been imported within a week. The 260 passengers who occupied the same compartment were detained at quarantine for observation. The Red Star steamer *Noordland*, which arrived April 9, brought two cases in the steerage, where there were 1,150 passengers.

Consumptive Sanitarium Soon to Open.—The new Mount Hope Tuberculosis Sanitarium, Otisville, will be open in six weeks, when 100 patients will be chosen from the outdoor patients under treatment in the tuberculosis clinic which is conducted next to the board of health buildings on Sixth Avenue.

Hospital Fund Divided.—The Hospital Saturday and Sunday Association has apportioned the fund collected in 1906. This amounts to $81,000. Of this amount Montefiore and Mount Sinai hospitals receive the largest amounts, $8,100 each. St. Luke's and the German hospital each received over $1,500, while the remaining funds were apportioned among some thirty-four other institutions in lesser sums.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended April 7, 1,809 cases of measles, with 72 deaths; 386 cases of tuberculosis, with 185 deaths; 324 cases of diphtheria, with 39 deaths; 229 cases of scarlet fever, with 8 deaths; 29 cases of typhoid fever, with 6 deaths; 35 cases of cerebrospinal meningitis, with 27 deaths; 36 cases of whooping cough, with 4 deaths; 36 cases of varicella, and 2 cases of smallpox, making in all 2,986 cases, with 341 deaths.

How to Safeguard Marriage.—The Society of Sanitary and Moral Prophylaxis, which met at the Academy of Medicine, April 12, discussed methods of safeguarding the marriage relation from venereal diseases. The advisability of attempting to regulate this evil by law was discussed and it seemed to be the consensus of opinion that this would not be wise at present. Dr. John A. Wyeth was in favor of more general education through the medical profession. Senator Lindsay discussed the legal aspect of the question.

OHIO.

Measles Epidemic.—Springfield reports 120 cases of measles; Lorain, 100 cases.

Fire Damage.—The house of Dr. Charles Bonifeld, Avondale, was damaged to the extent of $500 by a fire supposed to have been started by rats gnawing matches, April 7.

Found Guilty of Arson.—Dr. G. W. Whitney, Alvordton, charged with setting fire to his house in 1901 and who then pleaded not guilty, changed his plea, April 2, to guilty and was sentenced to imprisonment for a year in the state penitentiary.

Eye, Ear, Nose and Throat Specialists Meet.—The eye, ear, nose and throat practitioners of Ohio have arranged to meet at the same time and place as the Ohio State Medical Association in Canton, May 9 and 10. An excellent program has been arranged. Dr. Mark D. Stevenson, Akron, will deliver an address, setting forth the need of state organizations of eye, ear, nose and throat practitioners.

State Hospital Physicians Meet.—The semi-annual meeting of the Association of Assistant Physicians of State Hospitals was held in the Cleveland State Hospital, April 4 and 5. The following officers were elected: President, Dr. P. W. Tappan, Dayton; vice-president, Dr. Kensie S. West, Cleveland; secretary, Dr. J. F. Harbottle, Dayton, and treasurer, Dr. Rose E. Williams, Toledo. The October meeting will be held in Athens.

Interne Elections.—The following have been elected internes to Christ's Hospital, Cincinnati: Drs. R. T. Gould, C. DuBois, J. L. Tuetcher and C. Runyan.——The eight successful contestants for interneships in the Cincinnati Hospital were as follows: Drs. C. R. Keller, Charles E. Doerr, W. D. Palmer, R. H. Butler, W. H. Lewis, M. H. Doughty, John T. Batte and E. G. Richter.——The following are the successful contestants for interneships in the Jewish Hospital, Cincinnati: Drs. E. A. North, H. Lusher, Millard Wallenstein and C. J. Broeman.

Personal.—Dr. D. S. Sampsell, Ashland, has resigned as president of the Ashland County Medical Association, and Dr. Abram L. Sherick, Ashland, has been elected in his stead.——Dr. David N. Hopkins, Friendship, has been appointed physician of Scioto County.——Dr. John H. Moody, Harlem Springs, who is 96 years of age, claims to be the oldest practitioner in the United States.——Dr. Floyd F. Swimley, Forest, was severely burned and may be permanently blinded by the explosion of an acetylene tank, April 5.——Dr. Edgar J. March and Dr. H. P. Pomerene, Canton, and Dr. and Mrs. George W. Ryall, Wooster, sailed for Europe, April 7.——Dr. Frank L. Ratterman has been elected a member of the staff of St. Mary's Hospital, Cincinnati, vice Dr. John L. Cleveland, deceased.——The Hamilton Academy of Medicine has presented Dr. Minor M. Jacobs a quarter-sawed oak desk, with chair to match.——Dr. William S. Bushnell and family will return to Mansfield, April 25, after a winter in California.

PENNSYLVANIA.

State to Fight Typhoid in Pittsburg.—Because of the epidemic of typhoid fever in Pittsburg and the surrounding country, which receive their water supply from the Allegheny River, the State Department of Health is making preparations to compel towns and cities along tributary streams to treat their sewage before it is allowed to reach the waterways.

Society Sustains Doctor.—The Delaware County Medical Society at its triennial meeting adopted a resolution of sympathy for and confidence in Dr. Daniel P. Maddux, Chester. The society pledged its support in the coming retrial of the suit instituted by the parents of a patient operated on by Dr. Maddux for appendicitis. He is charged with performing the operation without the parents' consent, and they ask $10,000 damages.

Typhoid at West Chester.—West Chester is again in the throes of an epidemic of typhoid fever. Three students of the State Normal School have died of the disease within the last two weeks. The disease is not widely prevalent throughout the school. It first made its appearance in the school in March, and since then the disease has been gradaully on the increase and now 26 cases have been reported. It is thought that the contagion has been carried to the institution in the milk supply, for thorough investigation of all other sources of possible infection has revealed nothing.

State Tuberculosis Society Election.—At the annual meeting of the Pennsylvania Society for the Prevention of Tuberculosis, held in Philadelphia, April 11, the following officers were elected: President, Dr. Joseph Walsh, Philadelphia; vice-presidents, Rev. Herman L. Duhring, Samuel Castner, Talcott Williams, Drs. Seneca Egbert, Lawrence F. Flick, Samuel G. Dixon, Benjamin Lee, Maczyk P. Ravenel, Leonard Pearson and W. D. Robinson; secretary, Dr. Ward Brinton; solicitor, James L. Stanton, and directors, Samuel Scoville, Jr., James L. Stanton, Drs. Howard S. Anders, Ward Brinton, J. Solis-Cohen, J. W. Irwin, D. J. McCarthy, G. W. Norris, R. N. Willson, M. P. Ravenel, W. B. Stanton, A. P. Francine, J. C Foltz, C, J. Hatfield and F. A. Craig.

Philadelphia.

Births and Deaths.—The report of the revision of vital statistics of the bureau of health for March shows that 2,435 deaths were reported and 2,590 births.

Dinner to Drs. Spitzka and McClellan.—Dr. Hobart Amory Hare and Dr. Francis Xavier Dercum entertained as guests of honor at dinner at the Art Club, Drs. E. Anthony Spitzka and George McClellan, recently appointed professors of anatomy in Jefferson Medical College. Many prominent physicians were present.

Innovation in Ambulance Service.—The first auto-ambulance to be used in this city was placed in service by the department of public safety, April 7. This innovation in the ambulance service of the city is looked on with favor, and it is intimated that the near future will find the city supplied generally with these vehicles.

Sterilizers for Schools.—The present system of supplying filtered water in the public schools is looked on with disfavor by the department of health and charities, and Dr. Coplin, director of the department, has recommended the use of sterilizers instead of filters. Dr. Coplin said that the present filters leak and, therefore, can not be germ-proof. He does not believe there is a trustworthy filter in any of the public schools.

Bacteriologic Laboratory Report.—The report of the bacteriologic laboratory of the bureau of health for March shows that 902 cultures were examined for diphtheria bacilli, and that 627 specimens of suspected typhoid blood were examined. The laboratory also examined 943 specimens of milk and 153 specimens of sputum; 4,596,500 units of antitoxin were supplied, and 8 disinfection tests were made and 130 analyses were performed. Under the revision of milk inspection 6,512 examinations were made, which included 128,626 quarts of milk. Of this number 360 quarts were condemned. Of these examinations 10 were chemical and 993 microscopic.

Philadelphia Health Report.—The total number of deaths reported for the week reached 588. This is a decrease of 37 from the number reported last week, and an increase of 71 over the number reported in the corresponding period of last year. The principal causes of death were: Typhoid fever, 24; pertussis, 8; meningitis, 4; cancer, 16; heart disease, 57; acute respiratory disease, 105; measles, 16; diphtheria, 14; consumption, 67; apoplexy, 21; marasmus, 6; enteritis, 25; Bright's disease, 52; accidents, 15, and suicide, 7. There were 272 cases of contagious disease reported, with 40 deaths, as compared with 290 cases and 43 deaths reported in the previous week.

Personal.—Dr. Robert C. Moon has returned to Philadelphia from the West Indies.——Dr. Montgomery H. Biggs, retiring chief resident of the Philadelphia Hospital, was tendered a testimonial reception at the University Club, April 9. Formal addresses were made by Drs. William Pepper, W. B. Stanton, C. Y. White and Charles Browne.

Medical Inspection for March.—The report of the revision of medical inspection of the bureau of health for March shows that for the month all inspections made, excluding schools, were 10,667; 2,158 fumigations were ordered, and 45 patients were examined for special diagnoses. Medical inspectors made 6,783 visits to the schools and excluded 1,124 children from attendance. The inspectors collected 323 cultures, made 283 injections of antitoxin and performed 460 vaccinations.

Bubonic Plague.—It has been demonstrated positively by the United States Public Health and Marine-Hospital Service that the cases of suspected plague on the British steamship *Burrsfield*, from Bombay, are bubonic plague. The men ill with the disease are confined in the United States Quarantine Hospital at Reedy Island, and the steamship is held at the quarantine station. One of the patients died April 11. Every effort is being made by the authorities to prevent the spread of the disease.

TENNESSEE.

The State Meeting.—The seventy-third annual meeting of the Tennessee State Medical Association was held in Memphis, April 10-12, and the following officers elected: President, Dr. L. A. Yarbrough, Covington; vice-presidents, Drs. J. L. Andrews, Memphis, A. B. Cooke, Nashville, and J. R. Rathmell, Chattanooga; secretary, Dr. George H. Price, Nashville (re-elected); treasurer, Dr. W. C. Bilbro, Murfreesboro (re-elected); delegate to the American Medical Association, Dr. T. J. Happel, Trenton; alternate delegate, Dr. Heber Jones, Memphis. Nashville was selected as the place for holding the next annual meeting in 1907. The following resolution was unanimously adopted:

Resolved, That the Tennessee State Medical Association recommends to all affiliated county societies to make no insurance examinations for old line life insurance companies for less than $5. This resolution is to have no bearing on those fraternal orders where the examinee pays for his own examination.

The report of the meeting will be continued next week.

GENERAL.

Spring Term of the Naval Medical School.—The spring term of the Naval Medical School, Washington, D. C., commenced April 14.

To Raise Standard of Immigrants.—The house committee on immigration and naturalization has reported favorably on the immigration bill. This raises the head tax from $2 to $5, and provides an educational test for immigrants. Every person above the age of 16 years admitted to the United States must be able to read some language. It excludes imbeciles, the weak-minded, and manual laborers of poor physique.

Mosquito Extermination Society.—The third annual convention of this society was held in New York, April 11. William J. Matheson, president, in his opening address said that a large percentage of individuals in this country lose their lives or are incapacitated for work by disease caused by mosquitoes. He said that the society asks for the co-operation of every scientist and layman who desires to better his own or his neighbor's condition of existence. The "Mosquito Brief," otherwise known as the "confession of faith," is designed to convey to laymen information regarding these insects.

Sanitation in Cuba.—Minister Morgan, at Havana, reports that as an additional precautionary measure against yellow fever the sanitary department of that city has reapplied the regulations for house-cleaning enforced by General Ludlow in 1899, during the period of the American intervention, but which was discontinued in 1900. All buildings in the city are rigidly inspected and those found to be in an unsatisfactory condition are thoroughly cleaned by a sanitary brigade. Old clothes, paper and rubbish are carted away, loaded on large scows and dumped into the sea, five miles outside the harbor mouth. According to *Public Health Reports*, 120 men are at present engaged in this work under the direction of five inspectors. Thirty-five carts are in constant service, but the task has been so much heavier than was anticipated that it is proposed to enlarge the brigade in order that the city may be cleaned before the warm and damp season begins.

THE CHICAGO TUBERCULOSIS EXHIBITION.

Successful, Well-Attended Display of Statistics and Data on Tuberculosis Prophylaxis.

Objective demonstration of the causes and means for the prevention and cure of tuberculosis was the essential object which induced the National Association for the Study and Prevention of Tuberculosis to collect from all parts of the United States and from foreign countries whatever seemed to be illustrative of the progress made. Six cities have now seen the exhibition and there can not be any doubt that it has materially helped to arouse great public interest and to crystallize more or less spasmodic efforts. The Chicago Tuberculosis Institute secured the exhibition for a much longer time than the other cities (April 2 to 28) added to it, and arranged for conferences and lectures which, to judge by the profound interest taken in them, must have exerted a most salutary influence. Six conferences were held in the first two weeks, and also daily afternoon lectures, all of them bringing out crowded houses. A separate hall was set aside for them, with the banner of the international crusade against tuberculosis and many appropriate mottoes on the walls.

The formal opening on April 2 will remain a memorable occasion for Chicago. Dr. Frank Billings, as the president of the Chicago Tuberculosis Institute, introduced the principal speaker, Governor Charles S. Deneen, who outlined in his address the duties and limitations of the state's share in anti-tuberculosis efforts. Dr. Whalen, Chicago's commissioner of health, dwelt more particularly on milk supply and inspection as a factor of importance in the crusade. Dr. Webster, the president of the Illinois Board of Health, described the pioneer efforts made by the board. The great assistance to the maintenance of anti-tuberculosis efforts by a system of obligatory insurance for workingmen was lucidly shown by Prof. Charles R. Henderson of the University of Chicago. A touching demonstration of the pauperizing effects of the disease was given by Miss Jane Addams of Hull House. After addresses by Drs. Cigrand and Mix on other important phases of the problem this first conference adjourned.

Great interest was also manifested in the second conference of April 4, with Dr. H. B. Favill in the chair. Drs. Evans, Pettit, Sachs and Gray spoke on the subject of "Outdoor Treatment of Tuberculosis" from every point of view, and Miss Fulmer, head nurse of the Chicago Visiting Nurses' Association, presented the plans for a camp for tuberculous patients to be started immediately near Chicago. The announcement of the perfected plans for the establishment of a tuberculosis dispensary on novel lines by the Chicago Institute aroused considerable interest. The land has been given for it and funds for the building are accumulating. It is intended to play a rôle similar to that of the social settlement, with the difference that the medical and sanitary problems of the neighborhood will receive first consideration. A diet and milk kitchen, and a roof-garden school are the most distinct features of the plan.

Most interesting facts were brought out at the conference of April 6. The important subject of industrial workers and tuberculosis was discussed under the chairmanship of Prof. Graham Taylor. Particular interest was aroused by the statistics of Mr. Perkins, president of the cigarmakers' union. He demonstrated the tremendous tax levied by the disease on this one group of industrial workers. Dr. A. C. Klebs showed how preventive efforts and early treatment of tuberculous patients had effected great financial saving to organized labor and sick-benefit associations in other countries. He cited particularly the German insurance system, which had found of advantage a very considerable outlay of money for the establishment of sanatoria and healthy dwellings of the workingmen. Contrary to the usual conception of the subject, he showed that the system was not governmental and paternal, but socialistic in the broad sense of the word. Drs. Hamilton and Hedger gave interesting statistical data and also spoke of their experience in settlement work in various districts. Mr. Bisno gave the lay point of view on tuberculosis among garment workers.

The conference of April 9 took up the subject of "Charitable Organization and Tuberculosis," under Mr. S. C. Kingsley's chairmanship. The principal point brought out was the limitations of charity in dealing with the problem. The sustained, systematic effort necessary can not be maintained by charity, which has to concentrate on the care of the hopelessly advanced patients as its most legitimate field. Dr. Podstata's address forcibly dwelt on the inadequacy of institutional provisions for advanced consumptives in Cook County. The announcement by him of the establishment of a hospital for such cases within the city limits of Chicago was received with much satisfaction. Mr. Mullenbach told of the experience of the municipal lodging house with tuberculosis, demonstrating the great prevalence of consumption among the lodgers and the institution of preventive measures adopted for the safeguard of others. Mr. Bicknell of the Bureau of Charities and Mr. Riddle of Hull House told of their experience among the poor, and especially dwelt on the defective method of lodging house inspection in vogue in Chicago.

A most animated conference was the one held on the evening of April 12. Mr. Edwin G. Cooley, superintendent of schools, presided and outlined the various problems confronting the school management in dealing with tuberculous children and teachers. Rev. Mr. White of the board of education told of the plan adopted by the board to exclude such children, and other speakers insisted that such a plan was of great advantage, if proper provision could be made for such children. Drs. Churchill and Ryerson spoke of the medical aspects of this problem, and especially the difficulties encountered in the establishment of the diagnosis. Miss Addams described and recommended the establishment of garden schools, where children with early tuberculosis or those of tuberculous parentage could be taught out-of-doors in appropriate shelters. The results in such schools had been eminently satisfactory in Germany. Miss Fulmer told of the often deplorable condition among the poor children with tuberculosis of the glands, bones and joints, and the absolute lack of proper provisions for them. Dr. S. A. Knopf, New York, who had arrived earlier than expected, made a very forceful address on the deficiency of ventilation in public buildings, and especially that of the schools. This brought out a general discussion of this important subject in which several of the teachers present joined, showing the defects of systems of artificial ventilation and bringing many valuable suggestions for improvement in this as well as in the methods of cleaning of school rooms now employed.

Under the auspices of the Chicago Medical Society the Western Tuberculosis Conference convened April 14, Dr. H. B. Favill presiding. From Illinois and the neighboring states delegates had arrived in good numbers, and at the end resolutions were presented and adopted to make this conference an annual occasion, on which men and women interested and working in the cause could meet. It was the prevalent impression that this gathering is to become of the greatest importance to activity in this direction in the middle West. The principal addresses were made by the guests of honor, Dr. L. F. Flick, Philadelphia, the acting president of the national association, and by Dr. S. A. Knopf of New York. Both urged in eloquent language the great necessity of co-operation of both governmental and social elements in the crusade, which was so successfully inaugurated in this country by the National Association for the Study and Prevention of Tuberculosis and the Chicago Tuberculosis Institute.

The management of the Chicago Tuberculosis Institute can certainly congratulate itself for having inaugurated a campaign against the disease under the most favorable auspices. It has created not only a deep impression on the public mind, but it has brought together the most active workers and experts in the West for the one purpose of the eradication of that disease which most vitally affects the social welfare and health.

CANADA.

Outbreak of Smallpox Among Indians.—Consul Worman reports from Three Rivers that there is a serious outbreak of smallpox among the Indians and halfbreeds at Seven Islands, below Quebec. On account of the large number of laborers employed at Seven Islands in connection with the various industrial operations of Clarke City, the Dominion government and the provincial government have both taken steps to supply a staff of physicians and nurses, as well as medicine, and have ordered the icebreaker *Champlain* for service as a dispatch boat to this section of Quebec.

British Medical Association.—The honorary secretaries, Drs. J. N. G. Starr, D. J. Gibb, and Prof. J. J. MacKenzie, of the Medical Laboratories, University of Toronto, make the following announcement in connection with the seventy-fourth annual meeting of the British Medical Association, to be held at Toronto, Aug. 21-25, 1906:

MEETINGS OF SECTIONS.

The sections will meet on Tuesday, Wednesday, Thursday and Friday, August 21, 22, 23 and 24, at 9:30 a. m., adjourning at 12:30 p. m. each day.

SECTIONAL COMMITTEE OF REFERENCE.

The president, vice-presidents and secretaries of each section will form a committee of reference, and shall exercise the power of inviting, accepting, declining or postponing any paper and of arranging the order in which accepted papers shall be read.

GUESTS.

Papers by guests will be presented on invitation. If the committee of reference desires to invite persons to read papers in the section who are not eligible to become members of the association, their names should be submitted for the approval of the council. If it is desired to ask any such persons to attend the meetings of the section and to take part in the discussions a general permission to issue such invitation should be obtained.

All papers read are the property of the British Medical Association, and may not be published elsewhere than in the *British Medical Journal* without special permission.

DISCUSSIONS.

Secretaries are requested to communicate to the general secretary a preliminary statement of the arrangements made for the discussions in the section to be laid before the council at the earliest possible moment. This should consist of a statement of the subjects selected, together with the names, if possible, of the gentlemen who have undertaken to open the discussions.

PAPERS.

The offer of a paper should not be accepted on its title alone, and save under exceptional circumstances no paper should be accepted for reading until it has been sent to the secretaries.

The secretaries are requested to communicate to the general secretary of the association, 429 Strand, London, W. C., not later than June 15, a complete list of papers approved and accepted for reading.

It is suggested that the secretaries resident in the United Kingdom should collect papers from members on that side, and that the secretaries in Canada should deal with all papers in the Dominion and in the United States.

Only titles of papers which have been accepted, and which may be reasonably expected to be read, should be included in the program of sectional proceedings.

Offers of papers ought not to be accepted in excess of the number likely to be read. Failure to observe this condition leads to many inconveniences and gives rise to complaints of unfair preference.

REPORT IN THE BRITISH MEDICAL JOURNAL.

A report of the actual proceedings of the section will be published in the *British Medical Journal*, and in any communication addressed to persons who offered papers to be read in a section two things should be made clear:

1. Papers read are the property of the British Medical Association, and can not be published elsewhere than in the *British Medical Journal* without special permission.

2. The authors of papers not read have no claim for the publication of their papers in the *British Medical Journal*. Papers can not be "taken as read." If not read, they form no part of the proceedings of the section.

Secretaries are requested to co-operate in preparing the report of the proceedings of their section for publication in the *British Medical Journal*, with the reporter of the *British Medical Journal* appointed to the section, and to hand to him all matters for publication for transmission to the editor of the *British Medical Journal*, 2 Agar Street, Strand, London, W. C.

The attention of authors should be particularly directed to the time limit (see below), and the text of papers submitted for publication in the *British Medical Journal* as part of the report of the section should represent what is actually read to the section.

It is important that each author should hand the text of his paper in proper form for publication to one of the secretaries of the section immediately after it is read. It should be made clear that neglect to comply with this request may result in the omission of the paper in question from the proceedings of the section subsequently published in the *British Medical Journal*.

TIME LIMIT.

The attention of the council of the association has been called to the non-observance by readers of papers of the rule as to the time limit, which is as follows: "No paper must exceed fifteen minutes in reading and no subsequent speech must exceed ten minutes." The attention of presidents and secretaries of sections is particularly requested to this rule.

FOREIGN.

Oppression in Russia.—A St. Petersburg exchange states, March 31: "The dismissals from office and the arrest of medical men for participation in the political intrigues still continue. Dr. Fink, physician to the local prisons, has been dismissed because in his report to his superiors he called attention to the bad sanitary conditions of the political inmates of the prisons."

The Curable Tuberculous to Test African Climate.—The German authorities are discussing with favorable consideration the plan of sending a number of working people with mild forms of tuberculosis to German Southwest Africa instead of caring for them in sanatoria at home. The climatic conditions are said to be ideal, and by this plan they will be given a thorough test. The committee in charge of the temporary colony includes Kirschner and Katz of Berlin.

Bill to Regulate Marriage in Roumania.—Dr. I. T. Thomescu and other senators have recently drawn up a bill which prohibits the marriage of the tuberculous, uncured syphilitics, persons with heart disease, with general paralysis and infectious diseases of all kinds. A letter from Braila in the *Med. Klinik* states that some regulation of the kind is urgently needed in Roumania as an almost incredible disregard for such matters prevails and persons with florid syphilis now marry without the least restraint.

Proposed X-Ray Institute for India.—It is reported that the government of India has decided to establish an institution at Dehra Dun as a center for the practical instruction of medical officers in *x*-ray work, and as a depot for the storage of *x*-ray apparatus. The institution will be under the charge of an officer of the Indian Medical Service. Classes of instruction, according to the *Lancet*, will extend over a period of three months and facilities will be given officers who desire to acquire a knowledge of this special branch of medicine.

Progress in Enlightenment.—As a sign of the times we note a recent editorial in the Munich *Med. Wochft.* calling attention to the unprecedented way in which the national legislature voted appropriations for hospitals and hygienic measures. Heretofore these matters have received grudging attention with scant favor, but this year the comments were all favorable and commendatory. This transformation is due, the editorial hints, to the campaign of enlightenment which a committee from the Munich Medical Society (Aerztlicher Verein) has been quietly conducting for some months.

Glasgow Corporation and the Abuse of Alcohol.—The health committee of the Glasgow corporation recommended that a handbook be issued on "The Abuse of Alcohol and Its Results." The town council approved the recommendation and the pamphlet has been put in circulation. It consists of statements from the report of the Parliamentary Commission on Physicial Deterioration, and deals with the effect on adults and the effect of parental intemperance on the children. Emphasis is laid on two points: First, that the abuse of alcoholic stimulants is a most potent and deadly agent in producing physical deterioration, and second, that drinking habits are increasing among women of the working classes.

Central Sanitary Board for the Soudan.—Last October Sir R. Wingate, governor-general of the Soudan, approved the establishment of a board to advise the Soudan government on general medical and sanitary questions, including the treatment of epidemics. The president is Col. G. D. Hunter, D.S.O., R.A.M.C., and the members are eight in number, including the director of the Soudan Medical Department (Dr. J. B. Christopherson), the medical officer of health of Khartoum (Dr. A. Balfour), three medical officers of the Egyptian army, and a sanitary engineer. The *Lancet* states that this is a great advance, for the board will have to examine all schemes for medical and sanitary development, besides all legal ordinances and proposals connected with the public health.

Prizes Offered by Spanish Society of Hygiene.—Six prizes, the amounts ranging from $100 to $200, are offered by the Sociedad Española de Higiene. The competing articles can be written in Spanish, French or Italian, and must be sent in sealed envelopes. The Fernandez-Caro prize is for the best work on the hygiene of mines and means to enforce it. The Urgarte prize for the best on the subject of work and health, and their reciprocal influence on the duration of life; the Maura prize on sanitation of rural communities; the Guerra prize on Sunday rest and its relation to health; the Vadillo prize on hygiene and customs, and their mutual influence, and the Romanones prize on hygiene of the workingman's life in Spain. All communications must be addressed to the secretary-general, Sr. D. Mariano Belmas, Puerta del Sol, 9, Madrid, Spain, and be received before September 30 of the current year.

Sanitary Regulations for Hairdressers in Glasgow.—The Glasgow sanitary authorities and representatives of the hairdressers of the city, according to the *Glasgow Medical Journal*, have decided on certain regulations for the proper sanitary conduct of barber shops and hairdressing establishments. Shelves, fittings and tables on which instruments are placed must be of glass, marble, slate or other similar material. Clean towels must be placed on each headrest. No sponges or combs are to be used unless disinfected. Razors must be wiped on paper, and only clean hair brushes must be used. Shaving brushes are to be placed in a disinfecting solution after use, and only liquid or powdered soap or shaving cream is to be used. Other recommendations deal with rotary brushes, the cutting of hair in the case of skin affections, etc.

Smallpox and Yellow Fever in Ecuador.—Passed Assistant Surgeon Lloyd, of the Public Health and Marine-Hospital Service, reports that the situation in Guayaquil is very discouraging. From March 4 to 22, inclusive, there were thirteen deaths from smallpox and thirty-six from yellow fever. Local authorities give the present mortality at about 20 per cent. At the rate given for the nineteen days an estimate for March would be about 300 cases, with nearly sixty deaths. The actual number of deaths is probably, he states, a little under this figure, and the number of cases perhaps a little more than 300, because many mild cases are probably unrecognized. As there has never been a total of more than

twenty-six cases in the lazaretto at any one time, the indications are that perhaps two-thirds of the patients are not removed to the lazaretto. Inquiry among practicing physicians leads to the belief that this statement is not exaggerated. Many deaths are also inscribed in the records without specifying the nature of the fever, and Dr. Lloyd states that he has not considered these in the estimate given. Probably not half a dozen of the patients treated outside of the lazaretto have been protected from mosquitoes. He visited a number of patients who were suffering from typical attacks of yellow fever, and in not one case was any attempt made to screen the rooms. Should these conditions continue, Dr. Lloyd thinks that a longer quarantine would be justified or that passengers should be kept under observation before embarking, as contemplated in the regulations. Owing to the fact that adults who were born and reared in Guayaquil have recently been attacked by yellow fever, he is considering the advisability of recommending that the issuing of immune certificates be suspended.

Statistics in Regard to Adenoid Vegetations.—An examination was recently made of all the school children in Holland, between the ages of 6 and 12, for the discovery of adenoid vegetations. The minister of the interior issued an order that all the teachers should examine the children in their charge. To each teacher was sent a circular describing the principal external signs of adenoid vegetations. About 6 per cent. of the 300,000 children examined were reported as having them. As merely external signs were noted, this proportion is probably far below the real figures. In this and in other statistics on record the number of children with adenoid vegetations, discovered from the aspect of the face alone, was only 3.3 per cent. When the various external signs were noted it was 6 per cent., but when with the external signs the hearing also was examined, the proportion rose to 16 per cent., while local examination showed an average of 29.8 per cent. Although the statistics might not be reliable, yet the examination of the children, collecting of data and discussion of the subject aided materially in enlightening the public.

Cod Liver Oil in the Schools.—The gratuitous and compulsory administration of cod liver oil to all children for whom the school doctors prescribe it is included in the curriculum of the primary schools in parts of the district of Neufchatel, Switzerland. It is not stated whether the cod liver oil is prescribed for physical or moral degeneracy. In the latter case it might fill a long-felt want in the schools in this country as a substitute for the banished corporal punishment of our forefathers.

Remarkable Longevity.—A woman said to be 125 years old is now living in a Madrid hospital, in the service of Dr. H. Briz. She was born in Granada in 1780, her baptismal record being inscribed on the archives of a certain church. She entered the hospital thirteen years ago on account of a traumatism which left her blind.

LONDON LETTER.

The International Congress of School Hygiene.

The Duke of Northumberland presided over a preliminary meeting in connection with the Second International Congress of School Hygiene, which is to be held in London during August, 1907. Sir Lauder Brunton, president of the congress, in the course of a general statement on the arrangements said that the first congress was held in Nuremberg in 1904 and marked an epoch, because it was recognized then to a great extent that education should not be considered apart from physical conditions. The French are determined to do all in their power to make the congress in London a complete success, and other countries have also taken the matter up. He said that he was delighted with the reception that was accorded to the idea of an international congress in Canada and also in South Africa. He hoped that the congress would be a thoroughly representative gathering, not only of the colonies, but of every civilized country in the world. It is desired to see the important changes advocated in the physical education of children carried into practical effect. The congress, he said, promised to be one of the largest and most important ever held in London. Lord Reay then moved: "That in view of the importance of school hygiene in developing a strong and vigorous race, the necessity for scientific methods being followed in the training of the young, and for hygienic surroundings, being supplied in order to promote the health of the children during school life, this meeting consisting of representatives of educational authorities, medical men, teachers and others, is unanimously of opinion that it is desirable to hold the second international congress in London in August, 1907, to which representatives from India and the colonies should be invited in addition to representatives from other countries." He pointed out the enormous importance of hygiene in the elementary schools and particularly those in the poor districts of London. It is necessary, he said, that teachers should be trained to understand practical hygiene and that in this way great advantages would be reaped by the education given.

The Compulsory Medical Examination of School Children.

The question of the physical condition of the people has attracted much attention of late and considerable public alarm has been produced by the reiterated assertions of a number of faddists, who proclaim that the nation is physically deteriorating. As shown in former letters to THE JOURNAL, there are no grounds whatever for this pessimism. The council of the National League for Physical Education and Improvement has sent a deputation to the president of the board of education for the purpose of impressing on the government the importance of medical inspection of schools. This is to include the recording at least once every year of particulars of height, weight and chest girth of each child; the condition of eyes, ears, nose, throat; the detection of any disease, deformity or defect of general health, and the employment of all means possible to prevent the diffusion of offensive or infective diseases among children. The deputation urged that the examination should be compulsory and under the control of a central authority. The deputation was thoroughly representative and consisted of liberal and conservative members of parliament, the bishop of Southwark, Sir Lauder Brunton, Prof. Howard Marsh of Cambridge, the chief rabbi and Mr. Howard of the Salvation Army. Mr. Birrell, the president of the board of education, pointed out the difficulties arising from expense and from the possible prejudices of parents, but expressed his own sympathy with the general purposes of the league and his hope that they would be able to win that support of public opinion which would justify action. Professor Marsh pointed out that such an examination would do much to banish such ailments as measles, diphtheria and scarlet fever as completely as rabies has been banished by recent measures.

Fatal Accident to a Girl in Performing a Chemical Experiment.

A girl, aged 15, attending the Plymouth Technical School, met her death in a manner which should prove a warning to those responsible for the teaching of practical chemistry to children. In performing an experiment she had to suck a solution of caustic soda up into a pipette. Some of the solution entered her mouth and was swallowed. This experiment is provided for in the syllabus of the board of education and is carried out in practically all the technical schools of the country. The girl's mouth and throat were badly burned and she died a month later. The teacher who had conducted the experiment had included it in his instruction for the last ten years without accident. Now that this sad accident has happened, no doubt the authorities will insist that in future the experiment be conducted so as to make such an occurrence impossible. This could easily be done. At the inquest the father of the child pathetically asked: "Why was not a safety pipette used"? A pipette with a bulb would retain any excess of liquid which might be drawn up. A still safer and very ingenious invention has been introduced by Mr. Elias, who has called the attention of the authorities to it. It is termed a "fountain bulb." By compression of the bulb a burette or pipette can be accurately charged and all suction by the mouth is dispensed with.

Oysters and Sewage.

In the court of appeal an important case has been tried in which the urban district council of Warblington sought to have quashed a judgment of Mr. Justice Walton, who held that they as the sanitary authority were liable in damages for loss caused by the contamination of oyster beds situated on the foreshore of the manor of Emsworth. The council devised a scheme for the drainage of Warblington, the effect of which was to discharge the sewage just above the oyster beds. Dr. Bulstrode, a health officer of the local government board, visited the town and made a report in which he pointed out the danger that the oyster beds ran from contamination with sewage. Subsequently some oysters were supplied for a banquet, after which some of the guests were taken ill and died from typhoid fever. The result of an inquiry was to attribute the disease to the oysters. The trade of the proprietor of the beds being thus ruined, he brought an action to restrain the council from continuing to discharge sewage in the neighborhood of his oyster beds, so as to render the oysters liable to contamination and unfit for food. Mr. Justice Walton held that the plaintiff was not entitled to an injunction, but to damages, and ordered an inquiry. The defendants appealed, and the court affirmed the previous judgment.

The Invalid Children's Aid Association.

This association, which has been doing good work for seventeen years, now appeals for help. Its object is the care and relief of children suffering from tuberculous disease of the spine, bones, joints or glands, rickets, deformities, etc. These children require months and sometimes years of treatment, but they can not be retained in hospital indefinitely, and at home they are very liable to relapse even after successful operations. They are visited by women who are members of the association and, if possible, sent into the country; when this is impracticable they are provided with spinal couches or carriages, splints, crutches and the like, which the parents could not procure. Over $15,000 is spent yearly in the maintenance of beds constantly occupied in various homes in the country and at the seaside. About $2,500 is spent annually on surgical appliances, spinal carriages and other means of alleviation and physical improvement. A new departure in the association's work is an attempt to place children suffering from incipient phthisis under open-air and favorable conditions. Over 12,000 children have been under the care of the association, which works in co-operation with hospitals and other charitable agencies.

Pharmacology

A Hopeful Sign for Better Pharmacy.

A few weeks ago some of the progressive pharmacists of Chicago organized a local branch of the American Pharmaceutical Association; last week our news columns recorded the formation of a similar organization in Philadelphia. This movement is an encouraging sign and we certainly hope that it means that the retail druggists of the country have at last realized the position into which they have been gradually drifting.

For a number of years the efforts of a great number of retail druggists appear to have centered in obtaining better profits from "patent medicines." Evidently out of these efforts has developed a great, and in many respects a powerful organization, known as the N. A. R. D., with hundreds of affiliated local associations, the sole aim of which appears to be to aid "patent medicine" manufacturers to foist their wares on the public rather than to encourage its members to do better work as pharmaceutical chemists.

Largely through the efforts of this Association thousands of direct contracts have been entered into between "patent medicine" manufacturers and retail druggists by which the latter, in consideration of the additional profit promised them, voluntarily agree to refrain from discriminating in any way against the products of the manufacturer, and, while not so stated, to increase the sale of their articles.

It is largely due to the moral, or more correctly to the immoral, effect of this that retail druggists in all parts of the United States have apparently lost sight of the direct interests of the community at large and their true functions as pharmacists, and have not taken an active part in the agitation that is being waged against frauds in "patent medicines," but have, on the other hand, arrayed themselves against legislation that has been introduced in a number of state legislatures to eliminate secrecy, and with it the more evident possibilities of fraud, from the sale of popular nostrums.

The reawakening of pharmacists to the importance and need of higher ideals and higher aims in their vocation than the sale of nostrums at full prices, is indeed a promising one, and one that is worthy of our endorsement and support. To illustrate the objects and the aims of the new Philadelphia association we quote from the circular letter sent out as an invitation to pharmacists to attend the initial meeting:

"Among the more direct objects to be sought for and attained by the institution of a local branch, are:

"The development of a scientific spirit among the members of the profession.

"A more complete adherence to the Pharmacopeia of the United States and other generally accepted formularies in making the preparations to be used in the practice of medicine.

"The discovery and exposure of fraud and of fraudulent practices in connection with the materials used as medicine.

"The elimination of secrecy and fraud from the practice of pharmacy, and the cultivation of a proper appreciation, by members of the medical profession and others, of the ability, duty and position of an up-to-date pharmacist."

We physicians are in part responsible for the degradation of the retail pharmacy through our thoughtless prescribing of ready-made nostrums; and we should encourage this effort of the American Pharmaceutical Association to bring about better conditions. Undoubtedly a majority of the retail druggists of the country—certainly all the intelligent and educated among them—are opposed to the toadying to the "patent-medicine" men and will be glad of the promise of a better state of affairs which is becoming more and more evident. Pharmacy is to medicine what the ordnance department is to the army in the field; and the antagonism between the two, which has been developing in recent years, is destructive to the best interests of both, and, especially, of the public.

Deaths from Bromidia.

Dr. Horatio C. Wood, Jr., Philadelphia, writes:

One of the deleterious results of using proprietary mixtures even when the formula is known is that the physician gets in the habit of thinking of the mixture as a remedial entity, instead of a combination of active ingredients, and is thereby led to use this combination in cases in which he would have avoided the individual drugs making up the mixture. The following item is taken from the Philadelphia *Evening Telegraph*, February 13, and also appeared in several New York papers; it preaches an eloquent but pathetic sermon on this subject:

Within an hour after his father, a Brooklyn physician, had given him a dose of bromid, H. G. P., a prodigal son, died yesterday at his father's home in Brooklyn. Two years ago, when he appeared to have sown his wild oats, the father made him superintendent of his country place, near Grant's Mills, Delaware County. A week ago the son left his place, and at 1 o'clock yesterday morning appeared at his father's Brooklyn home. He was nervous, and at 9 a. m. begged for a sedative.

"I prescribed the usual quantity of bromidia," the young man's father told a reporter. "He was weak and had suffered from weak heart and kidney trouble for some time."

An hour later the father found the son dying and administered restoratives, but to no avail.

In an article published in THE JOURNAL, June 10, 1905, page 1836, I quoted in regard to bromidia the remarkable statement of the manufacturers that it is "the safest hypnotic known," and questioned how the addition of potassium bromid and tincture of hyoscyamus could overcome the depressant action of the chloral, which is the active ingredient of this nostrum. If the physician had thought of his bromidia as a solution of chloral rather than as a solution of bromid he probably would have hesitated before using it in an alcoholic case.

The following appeared in the Bangor (Me.) *Commercial*, March 8:

"Frank H. Perkins, a newspaper reporter of Plymouth, Mass., was found dead in a room in a hotel in Augusta, Sunday. The coroner stated that death was due to bromidia poisoning, but whether the drug was taken accidentally or with a suicide intent is a matter of conjecture. Perkins was a newspaper correspondent in Plymouth for 22 years. He left a few weeks ago to accept a position on the city desk of the Kennebec *Journal*. While a resident of Plymouth, he was correspondent for a number of Boston papers, and in recent years was connected with the Plymouth *Observer*. He was 55 years old and unmarried. It is understood that his nearest surviving relative is an aunt in Middleboro."

The above item was sent to Dr. O. C. S. Davies, Augusta, with a request that he send us a more complete report of the case. In his reply Dr. Davies stated that Mr. Perkins had at one time been an inmate of an inebriates' home and that he had gone to Augusta to do newspaper work, but had been unable to hold the position because of his condition. Dr. Davies, in his letter, says: "When the body was found, there were eleven one-ounce bromidia bottles about the room or on his person. Nine were entirely empty and the other two were about half full. None of these bottles indicated that they had been purchased on a physician's prescription, only the druggist's label marked 'bromidia' being on them."

Death from Headache Powders.

Dr. J. A. McCallum, Arkadelphia, Ark., reports a death from headache powders, self-administered: "Mrs. D. G. was subject to attacks of migraine, for which she had been in the habit of taking headache powders—the kind called 'Dixie pow-

ders.' She had taken at least three or four (possibly more) just preceding her death and while in a state of collapse from sick headache. Hypodermics of strychnin, digitalin and atropin with counterirritation with mustard plasters to inside of limbs and over spine, and hot water and mustard footbaths failed to revive her and she lived only a few hours."

Headache Powders and Deaths from Heart Disease.

Dr. W. H. Graves, Dodge City, Kas., writes:

"I was called to see a patient in a deplorable state of collapse from taking headache powders. I went to the drug store to investigate and found that the tablets were put up by a firm of high repute and long standing, but there was nothing on the label on the bottle or on the circulars to indicate the contents of the tablets. Neither was there any formula in the price list. I wrote to the firm in regard to the matter and learned what I suspected: that the tablets contained acetanilid. But the firm thought that as the average dose, according to the United States Dispensatory, was from five to fifteen grains, a tablet containing two grains could not do any harm unless it had been used recklessly. I protested that there was nothing on the package or in the price list to warn any one against the reckless use of an unknown and, therefore, doubly dangerous remedy. I called attention to the fact that in 1890, the first census since the use of coal-tar synthetics became at all general deaths from heart diseases were 38 per cent. more than in 1880, and in 1900 they were 72 per cent. more, allowing for the increase in population—this in the United States! They replied, expressing their astonishment and concern at the facts, to which their attention had never been called, and assuring me that they would at once take steps looking to a withdrawal of the preparation from the market.

"If the letter from one of whom they never heard before has such an effect on a manufacturing firm, surely letters of protest from old customers, known and esteemed for many years, will have decidedly beneficial influence."

Newspapers for "Patent-Medicine" Legislation.

One of the most encouraging developments of the past few months is the fact that many of the leading newspapers have come out in favor of regulating the "patent-medicine" business. The Chicago *Tribune*, one of the most influential newspapers of the country, is one of these, and we reproduce the following editorial from its issue of April 13:

HIDING THE SALE OF POISONS.

Protests continue to pour in against the proposed amendment to the regulations of the pure food bill relating to patent medicines, to which attention was called by the *Tribune* a few weeks ago. The bill as passed by the senate made it unlawful to sell a patent medicine containing certain dangerous drugs without a label stating their presence and the amount of them. The amendment permits proprietary preparations having less than two grains of opium or one-quarter of a grain of morphin to the ounce to be sold without such label to put the buyer on his guard.

There are two reasons why this should not be allowed. A quarter of a grain of morphin to the ounce may seem a trifle to the patent medicine manufacturer. The dose may be deadly for one who has never used morphin and is susceptible to its effects. The purchaser of a patent medicine which has been so heavily drugged may think an ounce is not too much to take at once and may put himself to sleep forever. There have been numerous instances lately of children killed by a patent medicine which was loaded with opium. There was nothing on the label to put the parents on their guard, and they unknowingly poisoned their children. That could not have occurred if there had been a decent law on the statute books.

In the next place the use of a patent medicine containing even an extremely small quantity of a drug like morphin may make him its slave. There is no question that thousands have become addicted to the use of narcotics in this way. If they had known what was in the nostrum they were taking they would not have touched it. Whenever a patent medicine contains such drugs as opium, morphin, or cocain, even in the smallest quantities, the label should set out the fact. Then the purchaser will buy at his own risk.

There would not be so many buyers as there are now. The patent medicine men are aware of it and that is the reason why they are lobbying so energetically in support of their dangerous amendment. It is strange that the members of the house committee are unable to see that they are co-operating in an attack on the life and health of the community. They are contributing to the spread of a baneful drug habit which it is so hard to cure. The amendment is said to have been accepted "tentatively." It should be rejected peremptorily by the committee, and if the amendment should be reported the house should make short work of it.

The proprietary medicine manufacturers have energetic agents at work in Washington. Organizations of physicians and other associations of citizens realizing the harm done by the indiscriminate and covert sale of poisons should bestir themselves to counteract their influence. Congress should be made aware that public sentiment is even more against the sale of unlabeled preparations containing poisons than it is against the sale of other fraudulent and deleterious commodities.

The Chicago *Evening Post*, April 12, has an editorial on the same subject, which we quote in part:

KILL THIS EVIL AMENDMENT.

It is the duty of every reputable physician and pharmacist in the United States, not only for his own sake but for the sake of his fellows, emphatically and formally to condemn one of the amendments to the pure food bill proposed by the United States Proprietary Association.

Briefly, this amendment provides that the maker of a patent medicine or proprietary article that is not prescribed by a physician, or one for which the formula does not appear in the United States Pharmacopeia or in the United States Dispensatory, shall not be required to print on the label the amount of poisons or narcotics it contains, provided this amount does not exceed two grains of opium or one-quarter grain of morphin to the ounce.

What druggist or doctor can read this amendment without being amazed at the blunted moral sense that could suggest it and shocked at the tremendous possibilities for evil that it so subtly aims to hide! * * * It was asserted that many patent preparations necessarily contained small quantities of narcotics and that when these were diluted as proposed in the amendment they would do no harm, "provided the patient did not know what he was taking."

Could ignorance or downright mendacity go further than this? No harm to give a person one grain of morphin in every four ounces of nostrum he swallows! No harm to make slaves to some drug habit, physical and moral wrecks, so long as the poor victims do not know the danger they are running! No harm to coin money at the expense of the health of thousands!

This amendment is utterly and absolutely bad. Yet it has been tacitly accepted by the committee and may become a feature of the pure food law. In that case it would legalize the selling of dangerous and harmful nostrums by anyone, for the sale of patent medicines is not restricted to druggists.

Let every physician, every druggist, every person who knows the awful dangers that lurk in the indiscriminate taking of narcotics, send his earnest protest against this amendment to his congressman and senators.

In this amendment lies unbounded power for harm; its mere proposal represents selfish commercialism at its lowest moral stage.

Even the Chicago *Daily News*, a paper which carries the most wretched "patent-medicine" advertisements, seems to be ready to defy the Proprietary Association of America, for in the issue of April 14 it too came out editorially against the "patent-medicine" men's amendment to the pure food bill, in an editorial entitled, "Another Attack on the Pure Food Bill." From this we quote:

Following the announcement that the makers of certain food preparations have succeeded in saddling the pending pure food bill with an amendment which threatens to render the measure nugatory comes the news of fresh opposition from another quarter. Deferring to the wishes of the makers of certain proprietary compounds, members of the House have given "tentative" adherence to an amendment which practically legalizes the sale of dangerous narcotics. . . . The person who consumes morphin in small doses without knowing what he is taking soon may find himself depending on the stimulant and developing a dangerous taste for the harmful drug. The very fact that he supposes the compound to be a medicine and regards its temporary quieting or exhilarating effect as beneficial, leads him to indulge in its unrestricted use, whereas he would resist vigorously any tendency toward becoming habituated to the use of opium or morphin sold by its proper name. In this as in the other features of the food bill, the consumer has a right to know whether he is getting something for his money that is likely to injure him. This is the principle adhered to in other countries, and it is the principle that should guide Congress unless this government is to go on record as legalizing a form of commercialism in which profits are sought at the risk of health and even of life.

We might quote similar expressions from newspapers in other parts of the country, but the above is sufficient to show that the Proprietary Association of America has "lost its grip" on papers of the town in which its headquarters are located.

Lay Resolutions Endorsing the Nostrum Campaign.

LEBANON, O., April 12, 1906.

To the Editor:—I enclose a copy of a memorial to the next general assembly of the Cumberland Presbyterian Church on the subject of medical advertisements, adopted by the Miami presbytery at its meeting in Lebanon, April 4, 1906. So far as I know this is the first instance of any religious body taking such action. It is to be hoped that many will follow the example. The work of THE JOURNAL on the nostrum question is heartily approved by all reputable physicians in Warren County. B. H. BLAIR, M.D.

WHEREAS, There appear in the columns of our church paper and other periodicals, medical advertisements which are objectionable because of their misleading, deceptive, untrue, and fraudulent character; and

WHEREAS, The publication of such advertisements tends to suggest the presence of disease, which does not exist, to cause a postponement of early diagnosis and appropriate treatment of many serious maladies, and to injure the physical, mental and moral well-being of many readers who implicitly rely on what they have read in their church paper; and

WHEREAS, Our official church organ, by its course in admitting such advertisements is subjecting itself to ridicule while other periodicals of recognized standing are refusing all medical advertisements; and

WHEREAS, Many of the popular nostrums advertised contain alcohol, opium, chloral or cocain or other drugs in quantities, the indiscriminate use of which tends to produce drug fiends and inebriates and thereby to defeat the cause of temperance as presented and advocated by the same paper; and

WHEREAS, Reputable Christian physicians of unquestioned professional standing and eminent qualifications, on whose judgment we must rely on questions of medical character and whose labor and influence are exerted for the moral and physical betterment of humanity, it is to be observed, are a unit in condemnation of such advertisements; and

WHEREAS, The injuries wrought and evils perpetrated by the practice of charlatans and quacks are recognized, only in their fullest, by physicians and in part by intelligent laymen; and

WHEREAS, No amount of money received from such advertisements can right these wrongs; and

WHEREAS, We affirm our affection for the *Cumberland Presbyterian* and express our confidence in its management and editorial control and observe with pride its attainment. Therefore, be it

1. *Resolved*: That the General Assembly direct its board of publication, through its agents, to refuse all advertisements of a medical character unless said advertisements are first approved by the board to be hereinafter named. And

2. *Resolved*, That this special board be composed of three physicians, selected by the board of publication, for their known high professional standing, eminent qualifications, ripe experience, and unquestioned integrity.

Societies Take Action.

PHILADELPHIA, April 7, 1906.

To the Editor:—Will you kindly insert in the columns of THE JOURNAL the enclosed resolutions of the Medicolegal Society of Philadelphia?

These resolutions echo not only the sentiments of the members of this society, but of all the medical societies of Philadelphia. ALBERT M. EATON.

The Medicolegal Society of Philadelphia thanks the Board of Trustees of the American Medical Association for establishing a Council on Pharmacy and Chemistry. It considers this innovation of paramount importance to the general practitioner of medicine.

This work comes at the right time; is done in the right spirit, and should be received by the medical profession with real thankfulness.

To the editor of THE JOURNAL of the American Medical Association we owe a debt of gratitude; his policy has been plainly and fearlessly presented, every position he has taken against all degrees of quackery he has sustained, and he should be encouraged to hold to this high standard.

The Medicolegal Society feels that this good work can not be assumed and performed exclusively by the Board of Trustees of the Association nor by the editor of THE JOURNAL.

We believe that all members of the American Medical Association should dedicate themselves to the promotion of this propaganda to a successful issue, and that every physician who is eligible should become a member, thus bringing to the organized profession strength, influence and wealth; factors of inestimable value in increasing the influence of the American Medical Association to both physician and state and the upbuilding of scientific medicine in America.

W. T. HAMILTON, M.D., Secretary.
ROYAL W. BEMIS, M.D.
ALBERT M. EATON, M.D.

At the annual meeting of the Morris County (N. J.) Medical Society, held at Morristown, March 13, 1906, resolutions were adopted commending and endorsing the work of THE JOURNAL A. M. A., the *Ladies' Home Journal*, *Collier's Weekly*, the *Farm Journal*, and the Marine (Ill.) *Telegram* in enlightening the profession and the public regarding the nostrum evil, and especially commending THE JOURNAL A. M. A. for refusing to publish advertisements of medical agents the composition of which is concealed. The society also deprecated the fact that daily and weekly papers, periodicals representing religious denominations and organs engaged in reform work, including even some medical journals, accept advertisements of "patent medicines" a great percentage of which are rank frauds. The society also offered its aid and co-operation in any wise effort toward the enactment of legislation that will protect the public from the evils of "patent medicines."

The Cleveland County (Ark.) Medical Society at its March meeting adopted a resolution heartily endorsing the work which the American Medical Association has done and is doing in regard to the control of the "patent-medicine" evil, and declared its intention of aiding the association in every way possible.

The Denver and Arapahoe County (Colo.) Medical Society, at a meeting held April 3, 1906, endorsed the resolutions on the nostrum evil which were passed by the Philadelphia County Medical Society January 10, and published in THE JOURNAL January 20; and the resolutions adopted by the New York Academy of Medicine, January 18, and published in THE JOURNAL January 27.

The society also adopted the following resolutions:

Resolved, That the secretary is hereby requested to tender the thanks of this society, especially to *Collier's Weekly*, the *Ladies' Home Journal*, and *Everybody's Magazine*, for their excellent work in behalf of the public health, in exposing impure drugs, impure foods and adulterated liquors.

Resolved, That we deeply appreciate the power and influence of the lay press in supporting the Pure Food Bill which recently passed the United States Senate and is now pending in the House of Representatives.

Resolved, That a copy of these resolutions be sent to each member of Congress of the State of Colorado with the request that they support the bill as it passed the Senate.

Resolved, That a copy of these resolutions be sent to the secretary of every county and district medical society in the state of Colorado with the request that they be presented to the respective societies for their consideration and their adoption urged.

Resolved, That a copy of these resolutions be sent to THE JOURNAL of the American Medical Association: and also to the daily press of Denver, requesting its co-operation in this endeavor to promote the public health and welfare.

W. W. GRANT,
GEORGE H. STOVER,
DANIEL S. NEUMAN,
Committee.

Madison County (Ky.) Medical Society at a recent meeting passed resolutions endorsing house bill No. 53, introduced by L. F. Johnson of Franklin County, the purpose of which is to regulate the sale of "patent medicines" in Kentucky.

At the regular meeting of the Dodge County (Neb.) Medical Society held at Fremont, March 8, 1906, resolutions were adopted endorsing the pure food bill as passed by the United States Senate during the session, and commending the policy of the *Ladies' Home Journal*, *Collier's Weekly* and THE JOURNAL of the American Medical Association in the fight against nostrums.

The society also ordered a copy of the resolutions sent to their representative in Congress requesting him to support the pure food bill on behalf of the physicians of Dodge County.

At a meeting of the St. James' Parish (La.) Medical Society, held December 7, 1905, resolutions offered by Dr. B. A. Colomb were adopted endorsing the movement against the "patent medicine" fraud and resolving to aid the lay journals and THE JOURNAL of the American Medical Association in this campaign by not prescribing such preparations. The Society also advised that the American Medical Association and its component societies distribute literature among the laity giving reliable information regarding the principal "patent medicines."

The Wayne County (Mich.) Medical Society at a meeting held March 5, passed resolutions endorsing the work of THE JOURNAL, the *Ladies' Home Journal*, *Collier's Weekly*, and the *Druggists' Circular* in the campaign against the proprietary and "patent" medicine evils, and asking members of the society not to use, or to sanction the use of remedies the nature and quantity of whose ingredients are unknown.

Similar resolutions were adopted by the Oakland County (Mich.) Medical Society, and by the Medical Society of the Borough of the Bronx (N. Y.). This last named society also commended the work of the Council on Pharmacy and Chemistry and urged each member to abide by the Council's reports and to prescribe nothing which the Council does not approve.

Letters of Commendation.

Dr. R. H. Bullard, Wheeling, W. Va., writes:

"I notice with much pleasure the position our JOURNAL takes regarding proprietary medicines. May the good work go on until the medical journals generally are forced to strike from their pages the 'thousand and one' advertisements the very existence of which is a cause for shame on the profession of medicine."

Dr. Walter W. Stebbins, Mount Horeb, Wis., writes:

"I wish to commend the fight you are making on nostrums. Keep up the good work."

Dr. W. J. Burdell, Lugoff, S. C., writes:

"Congratulations on the fight against nostrums and also congratulations to the editor for the splendid JOURNAL he is giving us."

Dr. W. K. McCoy, Gum Springs, W. Va., writes:

"I assure you of my unqualified endorsement of your fight against nostrums, whether 'ethical' or not."

The Methods of the Cheney Medicine Co.

Drs. Brown and Lenox, Rogers, Ark., send us an account of a case of catarrh which was not cured by Hall's Catarrh Cure. The patient, Mr. Robert Parks, consulted these physicians for catarrh and stated that he had just finished his twenty-sixth bottle of Hall's Catarrh Cure, but that instead of being benefited he was worse. Mr. Parks wrote to the Cheney Medicine Co., the makers of Hall's Catarrh Cure, giving his experience, and asking the firm to pay $100 in accordance with the advertisements: "$100 for any case of catarrh which it will not cure" or to refund the money he had paid.

The following is a copy of a letter which he received in reply:

TOLEDO, OHIO, March 30, 1906.

ROBERT PARK, Rogers, Ark.

DEAR SIR:—Yours of recent date received, and in reply will say, as we have already said, that many cases require much more than you have taken for a cure, and as this is the case and Hall's Catarrh Cure is not placed on the market on the "No cure, no pay" plan, we would not feel at all justified in refunding the money paid for this trial of the medicine. Will further say that you have failed to state much regarding your disease, symptoms of same, of how long standing, symptoms of the action of the medicine, etc. Had we more information concerning your case, we might have been able to make some helpful suggestions regarding the treatment. Yours very truly,

A. G. A. F. J. CHENEY & CO.

The above is an example of the shrewdness and the unscrupulousness of nostrum vendors. Their brazen offers of reward are fortified by conditions impossible to fulfill. Of course, a patient should not expect to get results from simply twenty-six bottles! He should keep on until old age carries him off, or he must be very sure to inform the company of his slightest symptoms or he will fail to reap the benefits of their valuable remedy. It will be remembered that Mr. Cheney is the author of the "Red Clause," he is the man who bragged to his fellows at the last meeting of the American Proprietary Association, of which he was president, of having a lobbyist in the different state legislatures so as to be ready in case any untoward legislation should be introduced. He is too shrewd a business man to risk having to pay $100 to every individual with catarrh who tries his nostrum without being cured.

Medical Legislation

Medical Men in Congress.

The Committee on Medical Legislation, in its efforts to secure the enactment of medical legislation, has felt the need of more representation in the halls of Congress. For the first time in several years the medical profession is represented in the House, the following two physicians having taken their seats in the present Congress:

DR. HIRAM RODNEY BURTON, of Lewes, Sussex County, Delaware, is a Republican member of the Fifty-ninth Congress. Dr. Burton was born in Lewes, Sussex County, Delaware, Nov. 13, 1841, and attended the schools of his native town. He taught two years in Sussex County and engaged in the mercantile business in Washington from 1862 to 1865, after which he entered the Medical Department of the University of Pennsylvania and was graduated in 1868. He then began the practice of medicine at Lewes, where he has since resided. Dr. Burton has played a prominent part in the politics of his native state for the past thirty years. In 1877 he was appointed deputy collector of customs for the port of Lewes; during the years from 1890 to 1893 he served as acting assistant surgeon, United States Marine-Hospital Service; he was appointed delegate to the national Republican conventions of 1896 and 1900; ran for state senator from the fifth district of Delaware in 1898; is a director in the Queen Anne's Railroad and in the Lewes National bank, and was elected to the Fifty-ninth Congress.

DR. ANDREW JACKSON BARCHFELD, Republican representative from the Thirty-second Pennsylvania district, was born in Pittsburg, Pa., May 18, 1863. He received his education in the public schools and Pittsburg Central high school, and was graduated from Jefferson Medical College, Philadelphia, in 1884. He has been actively engaged in politics since attaining his majority; was elected school director in 1885; a member of the common council of Pittsburg in 1886 and 1887; was a delegate to the Republican state conventions in 1886, 1894 and 1901; for some years a member of the Republican state committee; ran for Congress in 1892 and was defeated; took an active interest in presidential and gubernatorial campaigns in his state. Dr. Barchfeld stands high in the medical profession of his state and country. He is a member of the Pittsburg South Side Medical Society, Allegheny County Medical Society, Pennsylvania State Medical Society and American Medical Association, is president of the board of directors of South Side Hospital, Pittsburg, and a member of the staff. He was elected to the Fifty-ninth Congress in 1904 by a large majority.

DR. JACOB H. GALLINGER, Republican, of Concord, N. H., has represented the medical profession in the Senate since March 4, 1891.

He was one of a family of twelve children, and was born in Cornwall, Ontario, March 28, 1839, of Dutch ancestry, his great-grandfather having emigrated from Holland before the War of the Revolution.

Receiving a common-school and academic education, he studied medicine and was graduated in 1869 from the New York Homeopathic Medical College and Hospital. He settled in Concord, where he resided, pursuing the practice of medicine and surgery until elected to Congress. Dr. Gallinger was identified with the leading medical organizations of his state and country, and was a frequent contributor to medical literature.

He began his political career in 1872 when he was elected a member of the House of Representatives of New Hampshire, since which time he has continuously played a prominent part in the affairs of his state and country. He served his state as a member of the constitutional convention in 1876, was a member of the State Senate in 1878, 1879 and 1880; in 1879 and 1880 was surgeon-general of New Hampshire; in 1885 he received the honorary degree of A.M. from Dartmouth College; is a trustee of the George Washington University of Washington, D. C. For eight years he was chairman of the Republican State Committee, resigned and was elected in 1898, 1900, 1902 and 1904; in 1888, as chairman of the delegation from the State of New Hampshire to the Republican National Convention, he made a speech seconding the nomination of Benjamin Harrison; in 1900, was also chairman of the New Hampshire delegation to the Republican National Convention at Philadelphia which nominated William McKinley. He was at one time a member of the National Republican Committee and was elected to the Forty-ninth and Fiftieth Congresses. He declined renomination to the Fifty-first Congress. He was elected United States Senator to succeed Henry W. Blair and took his seat March 4, 1891. In 1897 he was re-elected by a unanimous vote of the Republican members of the legislature and the votes of five Democratic members. He was re-elected in 1903, having the distinction of being the only man in his state who was elected United States Senator for three full terms. His term will expire March 3, 1909.

Correspondence

Dr. McCormack's Organization Work.

JACKSONVILLE, ILL., April 17, 1906.

To the Editor:—I write to ask if it would not be desirable to do something to secure for Dr. McCormack audiences somewhat in proportion to the importance and value of the great humanitarian work which he is doing. It seems to me a shame for him to go on from day to day making these important talks to little groups of doctors and citizens, when every person is so vitally involved in the subjects discussed.

No one, who may call on a physician for services, should fail to hear these topics considered. The patrons of physicians will be greatly benefited and will look on the physician with

an increased respect if he is worthy, and if not will set about to make him worthy or discard him as unworthy. It is impossible for the local medical men to do this work effectively without more detailed information as to what is to be expected.

Last Tuesday evening Dr. McCormack talked to our citizens and the room was filled with our best people. Everybody was delighted, but all united in saying that it was a great misfortune that only two or three hundred people should have had the privilege of being present.

This is what I hear every place Dr. McCormack has talked. They say, "If we had only known something of the character of his address beforehand there would have been two or three times as many present."

The fact is, Dr. McCormack is doing a great missionary work, probably the greatest missionary campaign by any individual to-day, and we should recognize it as such and give it the support and advance announcement which it deserves. The profession, as well as the people, should be better instructed in advance as to the field to be covered and the objects of these talks. If it could be made plain that the primary object is to help the people and give them a proper conception of what organized medicine stands for, it would go far toward securing the coöperation of all good citizens in doing away with the inherited antagonism to the medical profession, which has long existed among our people.

The profession, as well as the people, should learn from him that the basis of most of our professional difficulties and misunderstandings with the public are to be found in the jealousies and antagonisms within our own ranks, which we are making a great campaign to eliminate. The doctors of the past have kept themselves poor by hating each other and misleading the public. Everyone should understand that one of the purposes of this great work in which Dr. McCormack is engaged is to improve the condition of the profession by pointing out its poverty, brought about by envy, jealousy and poor business methods.

He most admirably brings about a frank and open discussion of these subjects among the doctors and between them and all classes of the public. He drives home the lesson that a jealous and en-ious doctor, and one kept in poverty, is a danger and menace to the community, and plainly advises the public against the employment of such. Neither the doctors nor the people realize the number or importance of these problems of mutual interest.

His statement of the poor business methods of many physicians, as well as their bad professional methods, attracts attention and does great good. The drug store evil, the social disease evil, and inattention to sanitary and health matters are a few of the subjects of mutual importance which receive attention in his addresses and never fail to arouse the public.

The remedy for these and other evils and antagonisms which exist he finds in a complete understanding (organization) among ourselves and a frank discussion of every interest of the profession with selected classes of the public, as well as the general public and patrons of the physicians. If physicians would realize the importance of these subjects they would soon see, what Dr. McCormack makes so plain, that the medical profession has no interest, including our financial condition, which is not of far more importance to the public than to the doctors.

If some plan could be devised by which at least the members of our county societies were informed in advance of the scope and importance of these addresses, it would certainly aid Dr. McCormack in his work. No man can do this effectively for himself. In order that the lawyers, bankers, editors, clergymen, teachers, druggists, legislators, commercial bodies, city and county officials, civic leagues, W. C. T. U. and Y. M. C. A. members, club women, farmers' organizations, labor unions, and all others, can be impressed with the importance of the subject, they must have some advance information as to the personality of the man as well as the character of his address. Each doctor should endeavor to have his patrons present. He will be amply rewarded by the better respect and better pay which they will give him, for they will certainly hear some of the most vital questions of the day presented in a most charming, effective and practical way. Dr. McCormack can tell the plain truth in a way which excites great interest and desire to do better, but never leads to bitterness or leaves a sting.

This work has such unlimited possibilities for good to the public, to the sister professions, and to our own profession, that it is unfortunate that we do not secure for our field worker in this great campaign of education a better hearing. Scores of my own citizens have expressed their regret at not being more carefully informed as to what was to be presented in order that they could have attended. The purposes, the evils to be corrected, the classes to be reached, the remedy to be applied, and the possibilities of the work should be understood in advance if the greatest good is to be accomplished by these addresses.

You cannot too strongly impress on the profession and on the public the value and importance of the subjects, and you may rest assured that there will be no disappointment on the part of either after hearing one of Dr. McCormack's most admirable and practical addresses.

I write you in the hope that some better plan may be devised by which the profession and the public may have more advance information in order that a greater number of people may have the privilege of this instruction.

CARL E. BLACK.

Need for Additional Nomenclature.

CHICAGO, April 14, 1906.

To the Editor:—In view of the recent laudable attempts to establish the functional diagnosis of the alimentary tract by means of minute examination of the feces on a systematic and trustworthy basis—an attempt which I firmly believe will eventually justify itself in the satisfactoriness of its methods and the value of its findings—it seems as though a suitable nomenclature should be adopted in order to clarify and simplify the literary features of the undertaking. This nomenclature should be uniform with that of the pathology of the urine, since both are concerned with excretory products.

The word "feces," which is universally, and I believe exclusively used to designate the excrement of the bowels, is the plural form of the Latin word, *fæx*, meaning a sediment, of which the genitive form is *fæcis*, and in order to follow the nomenclature of the urine, I would suggest that the affix *sia* be applied to the root of the word, making *fæcia*, and this, in conjunction with the basic word, be used to express the pathologic condition in question. Thus, "hemafecia" would mean blood in the feces, "pyofecia" pus in the feces, "bilifecia" bile salts in the feces, and so on.

The question of nomenclature may seem to some a small and insignificant matter, but it is, I venture to think, by no means an unimportant factor in the orderly and systematic arrangement, and even in development, of a branch of applied science. THOMAS G. ATKINSON.

The Association Button.

CHICAGO, April 11, 1906.

To the Editor:—While traveling in the south recently I was accosted one morning by an elderly gentleman who certainly would not have spoken to me had it not been that I had on the button of the American Medical Association. I found that he was a practitioner from Ohio, that he belonged to the American Medical Association, but he did not have on a button. We were on good terms at once, and I enjoyed meeting him very much. This brought to my mind the great advantage that I believe would accrue to the members of the American Medical Association if each one would wear his button all the time. There is a fraternal feeling among the profession, probably stronger than that among any of the fraternal societies; yet, without some badge when we meet a strange physician, we do not know whether he is a physican or not, and if he is not a member of the American Medical Association we have some question about his standing, even though he claims to be a physician. The button would be an introduction at once and would place physicians on a pleasant footing, even though they had never met before. If all the members would wear their buttons it would soon be discovered by other physicians that it was

very desirable to belong to this great organization. I hope some plan can be formulated which will induce the members of the Association to put on this badge. It is small, unobtrusive, and the laity do not even know its meaning; therefore, I can see no objection to it. But certainly none of us need be ashamed of belonging to the American Medical Association, even if the laity knew what the button meant.

E. FLETCHER INGALS.

[Dr. Ingals' suggestion is a good one. There was a time when the doctor was known by his peculiar dress; his gold-headed cane was the insignia of his calling. But now there is no distinctive mark to separate him from his fellow mortals. Possibly some will say that it is not necessary, and probably this is true, but when traveling it is very pleasant, sometimes, to be able to go up to a man one has never met before, and with confidence extend the hand of greeting. The American Medical Association button is a means of introduction that will often bring two congenial souls together, to the pleasure of both.—ED.]

Trip to China and Japan.

ST. PAUL, MINN., April 14, 1906.

To the Editor:—The Great Northern Railway Company has made me a very generous offer. If I can organize a party of 100, to include physicians, their families and their friends, it will give us round-trip rates from St. Paul to Japan and China and return for $700. This rate includes a double berth from St. Paul to Seattle and return, dining-car service to Seattle and return, first-class hotel in Seattle if necessary either way, first-class outside stateroom on the 28,000-ton steamship *Minnesota* from Seattle to China and return, with not more than two in a room, first-class hotel accommodations in Japan and China, jinrickishas, carriages or sedan chairs in Japan and China when desired, first-class railway transportation in Japan and boat transportation in China. For any one joining the party on the steamship in Seattle and leaving the party at Seattle on its return, a rate of $625 will be made. If any members of the party wish to remain in Japan at their own expense instead of going to China with the steamship a refund of $75 is made. The above rates also include guides. The party will leave St. Paul about July 21, sailing from Seattle on July 25, and reach Seattle on its return October 5 and St. Paul about October 9.

If any physicians wish further details it will afford me pleasure to answer any questions. ALEXANDER J. STONE.

Hereditary Transmission of Yellow-Fever Parasite in the Mosquito.

BIRMINGHAM, ALA., April 14, 1906.

To the Editor:—I have just received a copy of "Yellow Fever Institute Bulletin No. 15," containing the account of an attempt to prove the "hereditary transmission of yellow-fever parasite in the mosquito."

In this experiment, fourteen mosquitoes, the progeny of three laboratory-grown mothers, were used, divided into three sets.

The mother of Set 1 was hatched in the laboratory. On October 3 she was allowed to sting a yellow-fever patient; again, on October 5, she stung same patient. On October 8, 10 and 12, she was allowed to feed to her fill on an immune. On October 17 she laid eggs for Set 1.

The mother of Set 2 was hatched from larva, "and for some time fed on immune blood." On October 4 she stung a yellow-fever patient. On October 6, 8, 10, 12 and 15 she fed on blood of an immune. On October 19 she laid eggs for Set 2.

The mother of Set 3 was raised from larva. On October 4 she stung a yellow-fever patient. On October 6, 8, 10, 12 and 14 she fed on blood of an immune. On October 18 and 19 and November 2 and November 13 to 18 she laid eggs for Set 3.

Now, let us suppose for a moment that hereditary transmission in the mosquito is a fact.

Immunity is supposed to be due to the presence in the blood of an immune of an antibody, and when the antibody disappears from the blood immunity ceases.

These mother mosquitoes were fed first on yellow-fever blood, then on immune blood, and afterward laid the eggs from which were hatched the experimental mosquitoes.

Is it not reasonable to suppose that the yellow-fever parasite taken with the yellow-fever blood, was destroyed by the antibody taken afterward in the immune blood, thus rendering it impossible to transmit the parasite by the eggs deposited at a later date?

And is not this experiment just as valuable in a positive way as the case of Marchoux and Simond, whose reported case was caused by mosquitoes hatched from eggs deposited by a mother fed only on syrup and yellow-fever blood?

J. M. LOWREY.

Tropical Gangrene in Guam.

NORFOLK, VA., April 9, 1906.

To the Editor:—In THE JOURNAL, April 7, a paragraph appeared under the above heading, doubtless inspired by a Washington dispatch of the Associated Press which was published widely in the newspapers recently. The dispatch related to a report made by a lay official in the Island of Guam referring to a peculiar disease which is prevalent in that island and which has already been recognized by professional authority under the name rhinopharyngitis mutilans. (Report Surgeon-General of the Navy, 1905, et al.)

The Associated Press paragraph states that the report from Guam refers to the disease as *gangrosa*. It is not to be wondered at that the correspondent of THE JOURNAL did not know what this meant, but he was hardly justified in assuming from the form or sound of the word that it meant gangrene. As the heading and content of the paragraph convey an impression which is very far from the truth, I hope the explanation necessary to enable THE JOURNAL to set itself right will not be unacceptable.

The Spanish adjective *gangoso* (masculine), *gangosa* (feminine), means snuffling, nasal, catarrhal, ozenous. It is applied by the Spanish (and, after them, by the Chamorros of Guam) to any person who has a chronic nasal affection, and the word is entirely without special application or meaning in connection with the *rhinopharyngitis mutilans* prevalent in Guam. In Spain, or in Guam, un *hombre gangoso* or *un gangoso* is a snuffler, a man who has the snuffles. A woman so afflicted is *una gangosa*. Gang(r)osa is a misspelling of the feminine form of this adjective and not the name of a disease. No form of gangrene is prevalent in Guam.

I have recently served more than two years in Guam as a medical officer and as health officer of the island, a longer time than any other American medical man has ever spent there, and feeling, as I do, a keen interest in all that pertains to the island and its welfare, I venture to ask you to correct the wrong impression which you have inadvertently given in the paragraph referred to.

A prominent physician of Philadelphia, whose daughter happens to be living in Guam at the present time, was so alarmed by this "gang(r)osa" nonsense as published by the Associated Press that he sent me the paragraph and asked me what it meant.

I send you herewith a reprint, from the *Journal of Tropical Medicine*, Feb. 15, 1906, of the latest article I have published on the disease, *rhinopharyngitis mutilans*. As the *Journal of Tropical Medicine* reaches a very limited number of readers in America, as neither the article nor its substance has been offered to or has appeared in any American publication, as Guam is an American possession and as our American medical men are taking an increasing interest in tropical medicine, you may care to take some more extended notice of the subject than the mere correction of the misinforming paragraph to which I refer, and if you do the article I inclose is entirely at your disposal.

JAMES FARQUARSON LEYS,
Surgeon United States Navy.

[In the article referred to Dr. Leys describes the disease as beginning with sore throat and showing, on examination, a small ulcer on the back of the pharynx, on a posterior faucial pillar or on the free edge of the palate. The ulceration almost always extends upward, destroying the soft palate and

attacking the bones of the palate and nasal septum, finally destroying these entirely. While the disease is usually arrested at this stage, leaving the face of the victim deformed from the falling in of the nasal cartilage and skin, in less than 10 per cent. of the cases the skin of the nose and face are attacked. In such cases one can look through the anterior nares into the mouth and down the throat.

The disease appears to be infectious, and, although somewhat amenable to local surgical and antiseptic treatment, the infection is very difficult to eradicate and the affection is prone to recur. There are no constitutional symptoms, the general condition being in marked contrast to that in tuberculosis and secondary syphilis.

The disease is known in various parts of Polynesia and probably also in the West Indies. It has been attributed to leprosy, syphilis, tuberculosis, and has been considered as a sequel of yaws. The first opinion is not entertained by those conversant with leprosy; the second is negatived by the fact that it attacks adults who have been in good health and who show no signs of hereditary syphilis and also children who have had no opportunity of acquiring it. Its restricted geographical distribution is inconsistent with a syphilitic origin, and the absence of constitutional symptoms speaks against its syphilitic nature. The victims present no evidence of tuberculosis in other parts of the body, and the disease does not extend downward, the larynx remaining unaffected.

Most authors who have mentioned the affection, as Manson, Daniels, Maxwell, Rat and others, have regarded it as a sequel of yaws. Dr. Leys, after reviewing the published opinions and their reasons, comes to the conclusion that the disease is distinct from yaws and offers a problem in tropical medicine that will well repay the attempt to solve its etiology according to modern methods of investigation. The opinion that it is a sequel of yaws is based mainly on the coincidence of the two diseases, but it is easily seen that while yaws prevails wherever rhinopharyngitis is known, the same is also true of tuberculosis and syphilis, while rhinopharyngitis is limited to a few localities, yaws being prevalent over a much greater area.]

Pulmonic Second Sound in Health and Disease.

PHILADELPHIA, April 16, 1906.

To the Editor:—In THE JOURNAL, April 14, 1906, appears a clinical note on the pulmonic sound in health and disease. There is suggested the undoubted, and often overlooked fact, that an evidently accentuated pulmonic sound in certain normal persons can be rendered normal by exercise, as the result of an equal distribution of the blood volume of the body, so to speak. Dr. Hardy concluded: "If this be true, it would seem that too much stress has been laid on this sign as an early indication of pulmonary tuberculosis, thus giving an opportunity, at least, for misleading conclusions." It is needless to say that a constant and pathologic increase in the intensity of the pulmonic sound is a valuable aid in the diagnosis of early pulmonary lesions, indicating as it does an overtension in the pulmonary circulation, almost, if not always, due to mechanical causes (congestion, consolidation, etc.). This increase in intensity, however, must be constant enough and marked enough to be certainly pathologic, and just at this point enters the personal equation of experience and judgment that renders the pulmonic sign valuable to one observer, and a source of error to another. Certain medical men are better off, I am sure, without any teaching about the pulmonic sound, since ear and stethoscope fail to bring the proper result in the absence of a natural sense of discrimination.

The general rule may be laid down, none the less, that a truly pathologic increase in the intensity of the pulmonic sound will never disappear until its causal condition is removed; and that such an increase, when due to tuberculous infiltration or congestion, will remain constant in spite of exercise, and will, as a rule, become exaggerated thereby. Under such conditions there can be no approximation of the aortic and pulmonic systemic pressures short of a cure. This is equally true of mitral disease and every other pathologic process that tends to produce over-tension in the pulmonic circulation.

ROBERT N. WILLSON.

Pauper Fees by Wealthy Corporations.

In THE JOURNAL, March 3, 1906, page 671, we referred to the absurdly low fees offered by the Maryland Casualty Company in their new schedule of fees. The subject came up for discussion at a meeting of the Jefferson County (Ky.) Medical Society, held March 27, 1906, at which Dr. Hugh R. Manning, Louisville, presented some letters from this company, and in discussing the matter said:

Much has been said and written of late about physicians' fees, especially the fees paid by various insurance companies for the examination of applicants for life insurance, and for first attention and services in "personal accident" and "employers' liability" insurance, all of which has been brought about by the action of practically all the companies in reducing the medical fees that were already so low as to be on a starvation ratio. . . . I maintain that no physician should make an examination of an applicant for life insurance for a fee less than $5, and that such examination should be made in a strictly honest and conscientious manner; whenever the policy to be issued the applicant is for a sum over $1,000, or whenever a microscopic examination of the urine is to be made, the fee should never be less than $10. Why, gentlemen, if you have a title company make an examination of the title of a piece of property you are about to purchase, that company will charge you a fee of $25 whenever the value of that property is $1,000 or less. Then is not the opinion of one of our profession as to whether a man is physically sound and a desirable risk for $1,000 of life insurance worth more than $2? If not, then it is not worth anything. The whole action of an insurance company must be based on the examination and report of the examiner, and the examiner should be paid for his expert knowledge or judgment in the matter. When you go to buy a horse you pay a veterinary $5 to look the animal over to ascertain whether he is sound, in which case you have $100 or $200 involved, and you think the money well spent; whereas, the insurance companies would have us make examination of their applicants for life insurance, requiring a great deal more technical training, where there is a thousand or several thousand dollars involved, and they offer us as remuneration for such services the miserable fee of $2. Just think the matter over. Aren't your services worth as much as a veterinary's? Isn't your time as valuable as that of a clerk's in a title company's office?

The remedy for these evils lies wholly in the united and concerted action of the profession. We will have to get together as lawyers have done, demand our rights—a reasonable compensation for the services we render—and we will secure them; but this end can not be secured without the united effort on the part of a majority of the profession. In other words, "The fault is not in our stars, but in ourselves, that we are underlings."

On receipt of the company's fee bill, which was published in the article above referred to, Dr. Manning wrote the company the following letter:

HAST BUILDING, Feb. 9, 1906.

Mr. Charles W. Maydwell, Manager Claim Division, the Maryland Casualty Company, Baltimore, Md.

Dear Sir:—I have to acknowledge the receipt of your communication of the 6th inst., inclosing new schedule of fees, effective March 1, 1906, and I regret the necessity of declining to accept such reduction in compensation as indicated therein.

In pursuing the course above indicated, of course, it is fully understood by me that my connection with your company terminates March 1, 1906, provided it is your determination to maintain such a schedule of fees, but I would like to be permitted to present to you some of my views as to why I do not consider it wise on your part and the part of the company to enforce it. No doubt you will find without great difficulty licensed and so-called doctors who will be glad of the opportunity of serving you for the miserable fees allowed by the schedule, and even then you will be paying them more than double what their services are worth; but no professional man of any intelligence, ability or reputation will serve your company or any individual for such remuneration as is offered by this new schedule. As to the increase in the volume of business and the "wedge by which you secure an entree into a new family" is concerned, it is a dream, a delusion and a snare; it should rather be stated that the increase in volume of "work" and consequent growth of "pauper practice" in many instances should make a doctor happy to serve you for less than a third of the fees paid by individuals of poor or moderate financial condition. Families into which it is desirable to have an entree always secure the services of higher-classed men than such of those who would be willing to accept such fees as indicated in your new schedule. If there is any particular department in your company where you need and demand, more than elsewhere, brains, intelligence, judgment and ability, it is in your field surgeon, for by his conservative and judicious action he saves you a hundred times the cost of his services, and incidentally prevents you many law suits and complications. You will pardon the personal allusion, but in the short time that I have been connected with the company I have saved the company many, many times the fees I have received. In one instance that I recall a doctor (who is of the class and kind whose services could doubtless be secured at the rate given in the new schedule) treated one of your policy-holders for six weeks on account of an injury to the hand, without discovering the fact that the patient had a broken thumb. This little oversight on the part of the doctor, of course, had the effect of giving the policy-holder double time for his total disability, to say the least. I merely recite this case to illustrate how it is possible that a cheap surgeon may be a very dear one. What would you think of a surgeon who would send you a bill of $3 for amputating your finger, or a number of your fingers, furnishing his own anesthetic (Squibb's ether at $1 for eight ounces), his own dressings (at a cost of no less than from 25 to 50 cents), his own instruments, his time, his horse and buggy or automobile—all for the sum of $3? Furthermore, this was an emergency call, so must be answered at once, regardless of office hours and everything else, and would require not less than from an hour to an hour and a half under the best

of conditions. I can imagine you would think, if you did not say, that that doctor had better get a job carrying a hod, for which he could get 50 cents an hour for eight hours every day and make a great deal more out of it. Likewise, I am certain that you would conclude that he can not have much more ability than the hod-carrier, and mentally resolve that in the future should you have to have anything of the kind done you would employ some one else to do it. Think of a surgeon in a city the size of Louisville performing an amputation at the hip-joint for $25. Compared with a hip-joint amputation, or even excision of the hip-joint, an abdominal section is a picnic, child's play, and the mortality of the former as compared with the latter is as one hundred is to one. A man would be nothing short of a fool who would take all this hazard, do all the work and neglect his private practice, which might pay him ten times the amount for the insignificant fee of $25; and I for one do not care for it.

Thanking you for past courtesies and kindnesses, and assuring you that I shall be glad to serve you at any time in the future at anything like a reasonable fee, or a minimum fee that may be collected from an individual, and hoping that you may be able to see my viewpoint, I am, Yours truly,

HUGH R. MANNING.

Following are the company's reply and Dr. Manning's answer:

BALTIMORE, Feb. 26, 1906.

Mr. Hugh R. Manning, Louisville, Ky.

Dear Sir:—You favor of the 9th inst., respecting our new schedule of fees, was received during my absence from the city, and a reply thereto has, for this reason, been delayed.

We have, as you suggest, found very many doctors willing to sign this schedule, and we know from experience that they are men fully qualified to perform the services required of them.

In view of the fact that such a large majority of our surgeons have agreed to be governed by the schedule in submitting their bills for services, I feel justified in asking you to give further consideration to the matter and advise us if you can not find it possible to give the schedule a fair trial, with the understanding that if it does not work out to your satisfaction the matter can be taken up for further discussion. Yours very truly,

CHARLES W. MAYDWELL,
Manager Claim Division.

HAST BUILDING, March 5, 1906.

Mr. Charles W. Maydwell, Manager Claim Division, Maryland Casualty Company, Baltimore, Md.

Dear Sir:—I thank you for the courtesy of your letter of the 26th ult., asking me to give further consideration to the matter of your new schedule of fees, with the understanding that should it not prove satisfactory after a fair trial to take up the matter for further discussion.

In reply I have to state that my action in declining to accept the new schedule of fees, under date of Feb. 9, 1906, was not taken without due consideration, and I still adhere to the views therein expressed, viz., that the fees allowed are inadequate and not acceptable to me. That there are others in the profession that share my opinion in this matter is evidenced by the clipping I have cut from THE JOURNAL of the American Medical Association, issue of March 3, 1906, herewith inclosed, which purports to have been written by Dr. C. H. Emery, of Bedford, Ind., a small town of about one-tenth the size of Louisville, Ky., and where the cost of living is much less. Doubtless you will hear from others along the same line, and I expect that you will find it a very unpopular measure.

There is a way in which a doctor may make a reasonable fee in all cases coming for first detention, provided he secures the "after-service." He can increase his charges against the patient, or make more visits than are warranted by the condition, or tell the patient that the insurance company pays only one-third fees and that he must make good for the balance—in short, by many dishonest and disreputable means, too numerous to mention; but I do not care to join the ranks of those who do this kind of work, and I imagine that it will, sooner or later, have a telling effect in the insurance field. A man who will practice deception to his patient will have no scruples in doing the same way by a corporation, and is a very unsafe man to deal with in any way. There is no field, unless it may be the insurance field, in which greater deception can be carried on without fear of detection than the practice of medicine; there is no professional field more full of shysters and charlatans, maintaining a degree of respectability unwarranted by their conduct. No respectable or self-respecting man can afford to work for the fees offered by the new schedule, unless he desires to put the "pauper Maryland Casualty Company" on his charity list and do their work for "glory." You can feel reasonably sure that the doctor has to have a living somehow, and you will have more "bogus" claims that will go through without a question, doubtless many others for which suit will be entered to enforce collection, and I verily believe that you will find small surgeon fees more expensive. Very truly yours,

HUGH R. MANNING.

Association News

Lodging-Houses and Boarding-Houses.

In the announcement in THE JOURNAL, April 7, it was stated that, in a future issue, a list of the boarding-houses and lodging-houses would be given; and the Committee on Hotels and Transportation volunteered to secure accommodations for all members who should request such service. It has been made clear, however, that great confusion and much annoyance are bound to result if any considerable proportion of those who attend the meeting negotiate directly with the proprietors of these houses while others are dealing with the same people through the committee. It has seemed best, therefore, to withdraw that part of the announcement and to simplify the work of placing members by having all applications and engagements pass through the hands of the committee. Members wishing the assistance of the committee will please specify the number of rooms desired, whether or not board is also desired, and the rate beyond which the committee shall make no engagements.

The committee advises early application, since, naturally, the most desirable accommodations in each class will be the first to be given out, on the principle of first come, best served. Members who delay action until arrival will be given the best that remains, but they should bear in mind the possibility of delay and disappointment.

The committee will spare no pains to place each applicant comfortably and satisfactorily, and will give to each its personal attention. CHARLES HARRINGTON, Chairman,
366 Commonwealth Avenue, Boston.

Excursion to Nova Scotia.

As one of the attractions following the Boston session a nine days' tour to New Brunswick, Nova Scotia, Maine and New Hampshire is being arranged. The party will visit a day or two in St. John, N. B., Digby, N. S., Bar Harbor, Me., and Portsmouth, N. H., and touch at the ports of Portland and Eastport, Me., and Lubec, N. B. A booklet fully describing the tour may be obtained from Dr. E. R. Campbell, Bellows Falls, Vt. As it will probably be necessary to limit the number of the party those desiring to go should write promptly.

Marriages

LESTER CURTIS, M.D., to Mrs. Mary B. Hibbard, both of Chicago, April 11.

FREDERICK H. LITTLE, M.D., to Miss Amelia Timm, both of Muscatine, Iowa, April 5.

S. D. LARGE, M.D., Hopkins, Mo., to Miss Sadie Musser, in St. Joseph, Mo., March 31.

CHARLES A. WORTHEN, M.D., to Miss Agnes L. Fitzgerald, both of Lynn, Mass., April 6.

JOHN B. SIMMS, M.D., Center, Texas, to Miss Julia A. Jordan of Neuville, Texas, April 8.

E. B. VAN ARSDEL, M.D., to Miss Marion Louise Farmer, both of Alamagordo, N. M., April 7.

W. HARRIMAN JONES, M.D., to Mrs. Ida Belle Musselman, both of Long Beach, Cal., March 29.

MAURICE OSTHEIMER, M.D., of Philadelphia, to Miss Martha S. McIlvaine of Downingtown, Pa., April 18.

WILLIAM HARRISON KENNEDY, M.D., Shelbyville, Ind., to Miss Effie Eleanor Burnham of Chicago, April 14.

SAMUEL MISLEY TRAVER, M.D., Steelton, Pa., to Miss Helen Elizabeth Harrison of Germantown, Pa., April 18.

NATHANIEL ORR, M.D., Charlotte, N. C., to Miss Susie Hales of Fredericksburg, Va., at Houston, Va., March 31.

GEORGE MONTGOMERY TUTTLE, M.D., New York City, to Mrs. Mabel Holden Kirkbride of St. Louis, in Florence, Italy, April 4.

Deaths

John Campbell, M.D. Albany (N. Y.) Medical College; a member of the medical department of the United States Army from 1847, when he joined as lieutenant, until 1886, when he retired as colonel, receiving in April, 1904, the rank of brigadier general retired; lieutenant-colonel and medical inspector, U. S. V. during the Civil War; a veteran of the Mexican War and of the various Indian campaigns, died at his home in Cold Spring, N. Y., Dec. 25, 1905, aged 84.

Edgar Allen Jones, M.D. Birmingham (Ala.) Medical College, 1898; professor of pathology in his alma mater; pathologist and bacteriologist to Hillman Hospital, Birmingham; secretary of the Jefferson County Medical Society, and a member of the Medical Association of the State of Alabama, died at the home of his uncle in Woodlawn, Ala., April 10, from tuberculosis, after an illness of more than two years, aged 29.

Jacob W. B. Wellcome, M.D. St. Louis College of Physicians and Surgeons, 1883; a pioneer of the Minnesota Valley; a member of the American Medical Association, Minnesota State Medical Society and Brown County Medical Society, died at his home in Sleepy Eye, April 8, after an illness of nearly a year, from malignant disease of the neck, aged 84.

Edward A. Crane, M.D. Harvard University Medical School, Boston, one of the organizers of the United States Sanitary Commission during the Civil War; a sanitary expert; for many years a resident of Paris, France, and editor of the *American Register*, died suddenly at his home in Paris, February 25, aged 73.

Archibell C. M. Moir, M.D. Tufts College Medical School, Boston, 1896; some-time house physician in the Cambridge Hospital; a member of the medical staff of Newton Hospital, and a member of the Newton Medical Improvement Society, died suddenly, March 29, at his home in Newton Highlands, Mass.

John Dickenson Curran, M.D. College of Physicians and Surgeons in the City of New York, 1901, of Binghamton, N. Y., for four years a member of the staff of the State Hospital in that city, died from typhoid fever at St. Augustine, Fla., April 7, after an illness of five weeks, aged 32.

Sanford Bert McClure, M.D. Medical College of Ohio, Cincinnati, for three years a contract surgeon in the United States Army, on duty in the Philippine Islands, died at his home in Walnut Hills, Cincinnati, April 6, from typhoid fever, after an illness of three months, aged 33.

Harry McKennan, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1889, secretary and treasurer of the Æsculapian Society of the Wabash Valley, and a member of the Illinois State Medical Society, died at his home in Paris, Ill., March 30.

T. Park Lewis, M.D. New York Homeopathic Medical College and Hospital, New York City, 1899, formerly of Waterville, N. Y., died recently while on his way home from Tucson, Ariz., where he had been living for two years on account of his health.

Andrew B. Stevens, M.D. University of Buffalo, Medical Department, 1873; the oldest practitioner of Watertown, N. Y.; a veteran of the Civil War, died at his home in Watertown, April 7, from heart disease, after a short illness, aged 66.

William W. Cozart, M.D. Medical College of the State of South Carolina, Charleston, 1866, a prominent practitioner of Granville County, N. C., died suddenly at his home, near Dutchville, N. C., April 7, from heart disease, aged 72.

Edward H. Kellers, M.D. Medical College of the State of South Carolina, Charleston, 1858, surgeon in the Confederate service during the Civil War, died suddenly from angina pectoris, at his house in Charleston, April 5, aged 70.

Thomas Beaver Wintersteen, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1899, formerly president of the Montour County Medical Society, died at his home in Danville, Pa., April 5, aged 33.

Andrew Jackson Smoot, M.D. University of Maryland School of Medicine, Baltimore, 1852, died from heart disease, April 11, at his home, Society Hill, Cooksey, Charles County, Md., after a lingering illness, aged 77.

Edgar A. Aikman, M.D. Rush Medical College, Chicago, 1891, a member of the American Medical Association and one of the best known physicians of Vermilion County, Ind., died at his home in Clinton, April 11.

Emmett Roberts, M.D. Geneva (N. Y.) Medical College, 1850, for many years a prominent practitioner of Berrien County, Mich., died at his home in St. Joseph, April 9, after an illness of one year.

Samuel B. Smale, M.D. Toronto University Medical Faculty, 1888, one of the oldest practitioners of Huron County, Ont., died at his home in Wroxeter, March 26, from pneumonia, after a short illness.

Hugh Cary, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1884, of Tenstrike, Minn., died in St. Anthony's Hospital, Bemidji, Minn., from nephritis, February 7.

Walter Alonzo Van Voorhis, M.D. Western Pennsylvania Medical College, Pittsburg, Pa., 1890, died at his home in Philadelphia, April 4, from the effects of a self-inflicted gunshot wound.

George G. Palmer, M.D. Medical College of the State of South Carolina, Charleston, 1876, died at his home in Cartersville, S. C., from tuberculosis, after a prolonged illness, April 2, aged 52.

John S. Burridge, M.D. (Years of Practice, Illinois), formerly of Erie, Ill., died at the home of his daughter in Dyer, Tenn., February 18, from jaundice, after an illness of three weeks, aged 72.

Francis Elmer Fuller, M.D. College of Physicians and Surgeons of Chicago, 1902, died at his home in Adrian, Mich., January 25, from pneumonia, after an illness of four weeks, aged 43.

Samuel E. Winnemore, M.D. New York University, Medical Department, New York City, 1856, a Confederate veteran, died at his home in Benton, Ala., March 28, from heart disease, aged 72.

John Wesley Moak, M.D. College of Physicians and Surgeons of Ontario, Toronto, 1902, died at his home in McGregor, Ont., April 17, from nephritis, after an illness of six weeks, aged 31.

Frank B. Nailor, M.D. Transylvania University, Medical Department, Lexington, Ky., died at his home near Vicksburg, Miss., January 1, from cerebral hemorrhage, aged 69.

Jarvis U. Woods, M.D. Hahnemann Medical College, Philadelphia, 1868, died at his home in New Haven, Conn., April 1, from cerebral hemorrhage, after a short illness, aged 63.

John Hamilton Hissey, M.D. College of Physicians and Surgeons, Baltimore, 1878, died at his home, near Honesville, Md., March 29, after a long illness, aged 53.

Morris Rogers, M.D. University of Iowa, Medical Department, Iowa City, 1869, died at St. Joseph's Hospital, Deadwood, S. D., Aug. 19, 1905, aged 67.

W. H. M. Kyle, M.D. Trinity Medical College, Toronto, 1900, of Grosse Point, Mich., died at his father's home in Palmerston, Ont., April 7, after a short illness.

P. A. Letourneau, M.D. Chicago Medical College, 1881, died at his home in Frenchtown, Mont., April 8, after a long illness, from pulmonary abscess.

R. A. Hutcheson, M.D. Medical College of Georgia, Augusta, 1883, died at his home in Toccoa, Ga., from a self-inflicted gunshot wound, February 7.

J. B. Henion, M.D. Eclectic Medical College of the City of New York, 1883, died suddenly at the Quincy House, Boston, March 10, aged 67.

B. H. Leblanc, M.D. Laval University, Medical Department, Quebec, 1885, of Point St. Charles, Que., dropped dead in Montreal, April 3.

G. W. Kelly, M.D. (Years of Practice, West Virginia), died at his home in Glendale, W. Va., April 6, after a long illness, aged 79.

George H. Alway, M.D. Detroit College of Medicine, 1894, died recently at his home in Detroit.

William McIntyre, M.D. (Examination), Ohio, died at his home in Warrensburg, Ohio, April 7, aged 82.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

A SOUND OF WORDS.

A subscriber writes: "The other day, a bright young girl, who had lived in the country and knew something about the barnyard, was reading an article for me in which the word cachectic occurred several times. She had some trouble with its pronunciation. About the fourth time she met it she began, 'Cache-c, cachec-, cachectic,' and then in desperation looked up with the remark, 'Every time I say that word I feel like a hen that had just laid an egg.'"

SYRUP OF LACTUCARIUM.

NEWARK, N. J., April 8, 1906.

To the Editor:—1. Can you give me the formula of Aubergier's Syrup Lactucarii? A druggist dispensed this instead of the U. S. P. Syrup Lactucarii, claiming that it was no more potent but of better flavor. 2. In the National Standard Dispensatory the editors in discussing Antipyrin say it is incompatible with Natrium salicylas. I have seen these two drugs combined several times, and have always seen a clear white solution result. Will you explain in what way they are incompatible? J. L.

ANSWER.—1. Aubergier's Syrup of Lactucarium is a proprietary-remedy, its exact composition, of course, is not known. It is generally believed to be a syrup flavored with orange-flower water and containing very little of the active constituents of lactucarium. The following formula appears in Hager's "Pharmaceutische Praxis," vol. 1, p. 272:

French extract of lactucarium	1|5
Hot water	500|
Sugar	1000|
Orange flower water	50|
Citric acid	1|5

The extract and 50 gm. sugar are dissolved in the hot water and the solution filtered. In the filtrate, after clarification with egg albumin, if needed, the remaining sugar is dissolved and then the orange-flower water and citric acid are added. The French extract of lactucarium referred to in the formula is not identical or even similar to the official lactucarium. 2. When antipyrin and sodium salicylate are triturated together a pasty mass results and such a mixture, therefore, can not be dispensed in powder form. A solution of antipyrin and sodium salicylate remains clear indefinitely and apparently no change occurs.

THE DOCTOR'S THREE FACES.

CLEVELAND, OHIO., April 9, 1906.

To the Editor:—The epigram quoted in your issue of March 31, 1906, page 979, seems to have been a favorite one among the old doctors. The following lines may be of interest to some of your readers. They may be found in a book entitled: "A Treatise of One Hundred and thirteene diseases of the Eyes and Eye-Liddes," by Richard Banister, Mr. in Chyrurgery, Oculift, and Practitioner in Phyficke. Imprinted in London, 1622.

"The Surgeon divided into foure parts, or the Surgeon's Comment."

1. A Surgeon's like a God whom they adore:
   When death about the ficke man's bed doth fore,
   Then hath he great refpect, and high regard;
   Fed with the fmoaky promife of reward.

2. But as the Patient doth begin to mend,
   So doth the Surgeons God-head ftraighwayes ends
   Yet fush attendance on him ftill is giuen,
   As if he were an Angel comne from Heaven.

3. When health and ftrengh the Patients doth infpire,
   To fleep, eate, walke, and fit up by the fire:
   Then ftrait the Surgeons ftate Angelicall,
   In their refpeft unto a man doth fall.

4. Laft, when the ficke or fore are heal'd agaone.
   And that the Surgeon feekes reward for's paine:
   Hee's neither counted God, nor Angel then,
   Nor is he intertained as a man.
   But (through ingratitude) that helleth euill,
   They bid the Surgeon, as welcome as the deuill.

The following lines, which I have seen credited—wrongly, I believe, to Pope, were doubtless inspired by the same sentiment:

"God and the doctor we alike adore,
But only when in danger, not before;
The danger o'er, both are alike requited,
God is forgotten, and the doctor slighted."

Pope who suffered from ill health during his entire life, always expressed the highest regard for the medical profession, and one time said, "They are in general the most amiable companions and the best friends, as well as the most learned men I know."

ALBERT RUFUS BAKER, M.D.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending April 14, 1906:

Truby, W. F., asst.-surgeon, granted 30 days' leave of absence.

Moncrief, Wm: H., asst.-surgeon, granted 7 days' leave of absence.

Kneedler, Wm. L., surgeon, reported for treatment at Army General Hospital, Presidio of San Francisco, Cal.

Harvey, P. F., asst.-surgeon-general., left Chicago, Ill., on 21 days' leave of absence.

Chidester, W. C., asst.-surgeon, reports on 30 days' leave of absence from duty in Philippines Division.

Gandy, Charles M., surgeon, relieved from duty at Fort Wayne, Mich., May 10, 1906, and ordered to surgeon general's office for temporary duty, and on completion of this duty will proceed to West Point, N. Y., as heretofore ordered.

Lewis, Wm. F., asst.-surgeon, reports in temporary charge of chief surgeon's office, Department of the Lakes, Chicago, Ill., in addition to his present duties.

Hallock, H. M., surgeon, sick leave further extended 30 days.

Richard, Charles, surgeon, granted 15 days' leave of absence, to take effect on the completion of his duties at Lisbon, Portugal.

Stone, John H., asst.-surgeon, granted 5 days' leave of absence, with permission to go beyond sea.

Usher, F. M. C., asst.-surgeon, granted 3 months' leave of absence, to take effect about May 1, 1906.

Banister, John M., deputy surgeon-general, promoted to the rank of lieutenant colonel, to rank from March 29, 1906.

Stark, Alexander N., surgeon, promoted to the rank of major, to rank from March 29, 1906.

Lynch, Charles, surgeon, promoted to the rank of major, to rank from April 2, 1906.

Truby, A. E., asst.-surgeon, granted 21 days' leave of absence about April 26, 1906.

Carswell, R. L., asst.-surgeon, leave of absence extended 30 days.

Blanchard, R. M., asst.-surgeon, relieved from duty in Philippines Division and ordered to proceed to and take station at Camp McKinley, Honolulu, Hawaii Territory.

Smart, William, asst.-surgeon, granted two months' leave of absence.

The following named assistant surgeons will report in person, on the dates specified, to Major William H. Arthur, surgeon, president of the examining board at the Army Medical Museum Building, Washington, D. C., appointed by Paragraph 7, Special Orders 219, War Department, Sept. 21, 1905, for examination to determine their fitness for advancement: April 24, 1906: Koerper, Conrad E., DeLaney, M. A., Halloran, Paul S., first lieutenants. May 7, 1906: Whitmore, Eugene R., Smart, Robert, first lieutenants. May 8, 1906: Buck, Carroll D., Nelson, Kent, first lieutenants. May 9, 1906, Allen, John H., Bevans, James L., first lieutenants. May 10, 1906: Ekwurzel, Geo. M., Whitcomb, Clement C., first lieutenants. May 11, 1906: Reno, William W., Roberts, William, first lieutenants. May 12, 1906: Sweazey, Verge E., Bloomburgh, Horace D., first lieutenants.

The following-named assistant-surgeons will report in person to Lieutenant-Colonel George H. Torney, deputy surgeon-general, president of the examining board at the General Hospital, Presidio of San Francisco, Cal., appointed by Paragraph 9, Special Orders No. 54, War Department, Oct. 17, 1906, at such time after April 30, 1906, as may be designated by him for examination to determine their fitness for advancement: Brownlee, Charles Y., Murtagh, John A., Patterson, Robert U., O'Connor, R. P., Heard, George P., Noble, Robert E., Brooke, Roger, Jr., Devereux, John R., Brechemin, Louis, Jr., Krebs, Lloyd Le R., Woodall, William P., first lieutenants.

Brown, Ire C., contract surgeon, left Fort Niobrara, Neb., with troops for Fort Washakie, Wyo.

Long, Stephen M., contract surgeon, order for Philippine service revoked; leave of absence extended two months.

McCallum, Francis M., contract surgeon, granted an extension of one month to his leave of absence.

Newton, Ralph W., contract surgeon, recently arrived at San Francisco, Cal., from Philippine service, ordered to temporary duty in the Department of California.

Adair, George F., contract surgeon, ordered from Fort Terry, N. Y., to Madison Barracks, N. Y., for temporary duty.

Purnell, Julius M., contract surgeon, relieved at Fort McDowell, Cal., and ordered to duty at Presidio of Monterey, Cal.

Marshall, John S., examining and supervising dental surgeon, returned to the Army General Hospital, Presidio of San Francisco, Cal., from temporary duty at Honolulu, H. T.

Stone, Frank P., dental surgeon, left Army General Hospital, Presidio of San Francisco, Cal., for duty at Fort Sam Houston, Texas.

Ware, William H., dental surgeon, left Fort Logan, Colo., and arrived at Fort Wingate, New Mexico.

Baker, Charles L., contract surgeon, granted leave of absence for three months.

Dillon, G. Parker, contract surgeon, relieved from further duty at Fort McDowell, Cal., and from treatment at Army and Navy General Hospital, Hot Springs, Ark., and ordered to duty at Fort Bliss, Texas.

Koyle, Fred T., contract surgeon, relieved from duty at Fort Bliss, Texas, and ordered to duty at Fort McDowell, Cal.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending April 14, 1906:

Warner, R. A., asst.-surgeon, ordered to the Naval Academy, April 10.

Schaller, W. F., asst.-surgeon, appointed assistant surgeon, with rank of lieutenant, junior grade, from March 21, 1906.

Kaufman, J. B., A. H. Robnett, M. H. Ames, C. K. Winn, W. S. Kuder, asst.-surgeons, appointed assistant surgeons, with rank of lieutenant, junior grade, from March 24, 1906.

Bucher, W. H., surgeon, ordered to Washington, D. C., April 14, for duty in attendance on course of instruction at the Naval Medical School.

Dorsey, B. H., asst.-surgeon, detached from duty with naval recruiting party No. 4, and ordered home to wait orders.

Winn, C. K., asst.-surgeon, ordered to duty with naval recruiting party No. 4, at Des Moines, Iowa, April 30.

Kuder, W. S., asst.-surgeon, ordered to the Naval Hospital, Boston, Mass.

Kaufman, J. B., and Ames, M. H., asst.-surgeons, ordered to the Naval Hospital, Norfolk, Va.

Robnett, A. H., asst.-surgeon, ordered to the Naval Hospital, New York, N. Y.

Farenholt, A., surgeon, detached from the *Oregon*, and ordered home to wait orders.

DeBruler, J. P., asst.-surgeon, detached from the *Oregon* and ordered home to wait orders.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending April 11, 1906:

Mead, F. W., surgeon, granted leave of absence for one day, April 16, 1906.

Guiteras, G. M., surgeon, granted leave of absence for two days, from April 16, 1906.

Wertenbaker, C. P., surgeon, relieved from duty at St. John, N. B., and directed to proceed to Quebec, Canada, with the commissioner of immigration.

Young, G. B., P. A. surgeon, granted leave of absence for three days from April 6, 1906.

Stimpson, W. G., P. A. surgeon, granted leave of absence for three days from April 11, 1906.

Blue, Rupert, P. A. surgeon, directed to report to the director of the Hygienic Laboratory, Washington, D. C., for temporary duty.

Blue, Rupert, P. A. surgeon, directed to proceed to Reedy Island Quarantine Station for temporary duty, on completion of which to rejoin station in Washington, D. C.

Anderson, J. F., P. A. surgeon, directed to proceed to Reedy Island Quarantine Station for special temporary duty, on completion of which to rejoin station in Washington, D. C.

White, M. J., P. A. surgeon, granted two months' leave of absence from July 15, 1906.

Lloyd, B. J., P. A. surgeon, granted leave of absence for fifteen days, from May 1, 1906.

McCoy, G. W., P. A. surgeon, granted leave of absence for one month, from April 8, 1906.

Frost, W. H., asst.-surgeon, temporarily relieved from duty at Baltimore, and directed to proceed to Ellis Island, New York, for temporary duty.

Bailey, G. W., acting asst.-surgeon, granted leave of absence for two days, from April 19, 1906.

Fogarty, J. N., acting asst.-surgeon, granted leave of absence for twenty-one days from April 13, 1906.

Griffitts, T. H. D., acting asst.-surgeon, granted leave of absence for thirty days from May 1, 1906.

Achenbach, John, pharmacist, granted leave of absence for thirty days, from April 3, 1906.

McKay, Malcolm, pharmacist, granted leave of absence for one day.

Scott, E. B., pharmacist, granted leave of absence for four days, from March 31, 1906, under Paragraph 210 of the Regulations.

Ryder, L. W., pharmacist, granted leave of absence for three days, from April 5, 1906.

Van Ness, Jr., Geo. I., pharmacist, granted leave of absence for thirty days, from April 25, 1906.

BOARD CONVENED.

A board of officers was convened to meet at San Francisco, on April 13, 1906, for the purpose of making a physical examination of an officer of the Revenue Cutter Service. Detail for the board: Surgeon H. W. Sawtelle, chairman; P. A. Surgeon J. M. Holt, recorder.

CASUALTY.

Acting Assistant Surgeon N. D. Richardson, died at San Francisco Quarantine Station, April 9, 1906.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, Public Health and Marine-Hospital Service during the week ended April 13, 1906:

SMALLPOX—UNITED STATES.

Arkansas: Fort Smith, March 24-31, 1 case.
California: Los Angeles, March 24-31, 15 cases; San Francisco, March 17-31, 27 cases, 4 deaths.
District of Columbia: Washington, March 31-April 7, 1 case.
Florida: Jacksonville, March 31-April 7, 1 case.
Georgia: Augusta, March 26-April 2, 4 cases.
Kentucky: Covington, March 31-April 7, 2 cases.
Louisiana: New Orleans, March 31-April 7, 5 cases.
Maryland: Baltimore, March 31-April 7, 3 cases.
Michigan: Detroit, March 24-April 6, 2 cases; Grand Rapids, March 31-April 7, 1 case.
Mississippi: Natchez, March 31-April 7, 1 case (on vessel).
Missouri: St. Louis, March 31-April 7, 2 cases.
New Jersey: Hudson County, April 1-8, 4 cases.
New York: Buffalo, March 24-31, 1 case; New York, March 31-April 7, 2 cases.
North Carolina: Greensboro, March 31-April 7, 3 cases.
Ohio: Cincinnati, March 30-April 6, 3 cases; Cleveland, 1 case.
Tennessee: Knoxville, March 31-April 7, 1 case.
Utah: Ogden, March 1-31, 3 cases.
West Virginia: Wheeling, March 30-April 6, 2 cases.
Wisconsin: Appleton, March 31-April 7, 4 cases.

SMALLPOX—FOREIGN.

Africa: Capetown, Feb. 24-March 3, 4 cases.
Austria: Gallicia (province), Feb. 18-March 3, 4 cases; Voralberg (district), 17 cases.
Canada: Seven Islands, March 21, present; Winnipeg, March 24-31, 1 case.
Chile: Iquique, March 3-10, present.
China: Hongkong, Feb. 10-24, 24 cases, 17 deaths.
Ecuador: Guayaquil, March 4-22, 13 cases.
Egypt: General, Dec. 17-31, 77 cases, 14 deaths.
France: Paris, March 17-24, 6 cases, 1 death.
Germany: Kehl, Jan. 1-31, 1 death.
Gibraltar: March 18-25, 4 cases.
Great Britain: London, March 17-24, 5 cases.
Greece: Patras, Feb. 27-March 6, 3 cases, 2 deaths.
India: Bombay, March 6-13, 8 deaths; Calcutta, Feb. 24-March 3, 189 deaths; Karachi, Feb. 25-March 11, 53 cases, 20 deaths; Madras: March 3-9, 48 deaths; Rangoon, Feb. 24-March 3, 83 deaths.
Italy: General, March 15-22, 35 cases.
The Netherlands: Rotterdam, March 24-31, 3 cases.
Russia: Moscow, March 3-17, 19 cases; Odessa, May 17-24, 6 cases.
Spain: Tarragona, March 17-24, 2 deaths.
Turkey: Constantinople, March 11-18, 2 deaths.

YELLOW FEVER—FOREIGN.

Ecuador: Guayaquil, March 4-22, 36 deaths.
Mexico: Merida, April 10, 1 case; Salina Cruz, March 18-24, 1 case (imported); Tehuantepec, March 18-24, 1 case (imported); Vera Cruz, April 7, 1 death (imported).

CHOLERA—FOREIGN.

India: Bombay, March 6-13, 2 deaths; Calcutta, Feb. 24-March 3, 50 deaths; Rangoon, 2 deaths.

PLAGUE—FOREIGN.

China: Hongkong, Feb. 17-24, 17 cases, 16 deaths.
India: General, Feb. 24-March 3, 3,425 cases, 2,739 deaths; Bombay, March 6-13, 411 deaths; Calcutta, Feb. 24-March 3, 59 deaths; Karachi, Feb. 25-March 11, 67 cases, 58 deaths; Madras, March 3-9, 4 deaths; Rangoon, Feb. 24-March 3, 30 deaths.
Peru: Callao, Feb. 24-March 5, 1 case; Lima, 1 case, 1 death; Mollendo, 1 case; Paita, 2 cases, 2 deaths; Trujillo, 13 cases, 6 deaths.

Book Notices

THE AUTOMOBILE. A Practical Treatise on the Construction of Modern Motor Cars, Steam, Petrol, Electric and Petrol-Electric. Based on Lavergne's "L'Automobile sur Route." Edited by P. N. Hasluck. Special Edition, Enlarged, with 804 Illustrations, 8 Full-page Plates and an Addendum. Vols. 1 and 11. Cloth. Pp. 451-864. Price, $7.00 net. Chicago: W. T. Keener & Co.

If there is one thing more than another brought out in the automobile articles in this number of THE JOURNAL, it is that the physician who wishes to save himself from worry and expense should learn the details of the construction of his automobile. Some of this information may be had from books and some can only be had from actual, often painful, experience. Frequently it will be the cheapest and most satisfactory way to have a short course in instruction from a competent chauffeur or automobile machinist. The novice, however, should preface any such instruction by an understanding of the general principles of auto motors, etc., which he may gain from some good book on the subject. The work before us, in two handsome volumes, is well called a compendium of information, and it discusses every feature of the automobile with the details of construction, operation and repair. The first chapter is an interesting history of the evolution of the automobile, and then are taken up the various forms of motive power, steam, gasoline and electricity. The second volume takes up the details of wheels, tires, springs, frames, brakes, lubrications and then discusses the chief automobiles of England and the continent, as well as many American cars. The information about motors and motive power is of universal application and can be recommended for those who wish instruction. The illustrations are particularly valuable, being abundant and with full explanations, and will be much appreciated by the student.

SELF-PROPELLED VEHICLES. A Practical Treatise on the Theory, Construction, Operation, Care and Management of all Forms of Automobiles. By J. E. Homans, A.M., with Upward of 500 Illustrations and Diagrams, Giving the Essential Details of Construction and Many Important Points on the Successful Operation of the Various Types of Motor Carriages Driven by Steam, Gasoline and Electricity. Cloth. Pp. 652. Price, $2.00. New York: Theo. Audel & Co. 1905-1906.

This readable book discusses the entire subject from history through all the methods of application of power to the details of accessories. The illustrations are very good, clear and fully described. The subdivisions of the matter render reference from page to page easy. The book is written "for the practical information of such persons as have neither the time nor inclination to delve deeper into the subtleties of mechanics than the construction and the management of their machines require," and we can recommend it to anyone interested in the subject.

ORGANOTHERAPY, OR TREATMENT BY MEANS OF PREPARATIONS OF VARIOUS ORGANS. By H. B. Shaw, M.D., F.R.C.P. Illustrated. Cloth. Pp. 256. Price, $1.75 net. Chicago: W. T. Keener, 1905.

Almost one-third of Dr. Shaw's book is concerned with the thyroid and parathyroid glands. Other sections deal with the suprarenal glands, the alimentary tract, including the pancreas and liver, and genitourinary organs. A final section under the heading of "Other Organs and Tissues" considers the pituitary body, thymus, spleen, hemal lymphatic lymph glands, lymphatic glands, marrow, muscle, nerve tissue and placenta. A most commendable feature of the treatise and a most rational one is the fact that, in relation to each organ, the anatomy, physiology, chemistry and pathology are considered before the reader is introduced to the question of organotherapy. This is done without the too laborious citation of authorities, yet it could not be said that the author has omitted important references. Obscure questions in anatomy, etc., are dismissed satisfactorily with statements of the best opinions of the present time.

The same spirit of fairness and broad treatment is to be seen in the chapters dealing with organotherapy, which has been treated with sufficient thoroughness, considering the degree of chaos which manifestly exists in this field. In instances in which serum therapy, with specific cytotoxic serums, has been practiced and advocated, the results, which are largely negative, inconclusive and often misinterpreted, are given by the author. A reading of the book impresses one strongly with the great need of more physiologic knowledge, without which organotherapy, with one or two luminous exceptions, can be put to nothing more than empirical use.

CHEMISTRY OF THE PROTEIDS.. By G. Mann, M.D., B.Sc., University Demonstrator of Physiology, Oxford. Based on Prof. Otto Cohnheim's 'Chemie der Eiweisskörper." Cloth. Pp. 606. Price, $3.25. New York: The MacMillan Co. 1906.

RECENT ADVANCES IN PHYSIOLOGY AND BIO-CHEMISTRY. Edited by Leonard Hill, M.B., F.R.S. Contributors, B. Moore, M.A., D.Sc., J. J. R. Macleod, M.B., L. Hill, M.B., F.R.S., M. S. Pembrey, M.A., M.D., and A. P. Beddard, M.A., M.D., with Diagrams. Cloth, Pp. 740. Price, $5.00 net. New York: Longmans, Green & Co. 1906.

The appearance of these two books in the market is a striking evidence of the spirit of the times, and of the rapidly increasing interest and participation in the progress of biologic investigation in the English-speaking countries. They will be welcomed not only by students of the biologic sciences, but also by those practicing physicians who desire to keep abreast of the advances that are being made in the chemistry of living processes both in health and disease, and from which we must expect most of the progress that will be made along many lines of medical research for years to come.

Mann's "Chemistry of the Proteids" originated in a plan of the author to present to English-speaking students a translation of the standard work on the chemistry of the proteids. Cohnheim's "Chemie der Eiweisskörper"; but, being extremely full of original and independent ideas (as we have learned from his work on "Physiological Histology") Mann found himself unable to adhere to the production of a mere literal translation of another's work. As a result we have a book based on the work of Cohnheim, brought up to date from the second German edition, and so amplified that instead of the 308 pages of Cohnheim we have 584 pages of text in Mann's book. The increase in size represents partly the natural growth of the subject matter, partly an expansion of the consideration of certain topics that seemed of particular importance to the author, and partly the incorporation of his original ideas and their consideration. Thus we find much emphasis laid on the relation of the inorganic salts to the proteid molecule, a matter that those in this country who are familiar with J. Loeb's work will appreciate. As Mann said in his first book, salt-free proteids are dead proteids—it is the presence of salts that puts life into them. This view, of course, rests on an acceptance of the importance of electrical phenomena in chemical reactions and biologic processes, and Mann particularly urges the view that even the colloids are electrolytes that undergo dissociation to a certain degree. The work of Fischer and others on the synthesis of proteids is given quite fully. Taken all in all, this work is an important addition to the scientific literature in the English tongue.

The scope of the second book is indicated by its title, and we are promised that if this first effort meets with sufficient success it will be followed by further publications of like nature, an enterprise that is bound to be welcomed by all those who have the interests of medical science at heart. The book opens with a consideration of the chemical and physical principles underlying metabolism and enzyme action in general, which are then applied to a discussion of the problems of secretion. More specialized topics are then taken up, including the consideration of the atmosphere and the effects of increased and decreased atmospheric pressure. Separate chapters are given to the topics of carbohydrate, fat and purin metabolism; the relation of water to metabolism; the formation of urea and the secretion of urine; the formation of lymph and the mechanism of absorption from the small intestine. Recent work on hemolysins, cytotoxins, etc., as well as on the internal secretions, are also briefly summarized. The important question as to the amount of space that shall be given to bibliography has been compromised by putting at the end of each section references to the chief reviews on the topic, and also to most of the important papers. The book carries the impression that it is written for the advanced student, or perhaps better for the ordinary student who is not content with learning the fundamentals of the essentials of medicine, but wishes to know along which lines progress is being made, and what suggestions original minds have brought forth that will lead him into new fields for himself. The number of students of this type is growing, both among those who have graduated in medicine and among those who are at the beginning of their work, and the publication of such books is undoubtedly the greatest aid in the development of men who appreciate that medicine is a biologic science in the truest and broadest sense of the word.

Miscellany

Metabolism of Colds.—H. Wakefield (*Medical Record*), thinks that colds represent the results of disorders of metabolism due to local circulatory disturbances following the unequal exposure of some part of the body to cold. The degree of temperature is subordinate to the state of inequality produced, for a cold may be due to the extrinsic effect of either cold or heat if sufficiently pronounced or abrupt to insure a localized action of definite heterogeneity for the balance of the organism. The author has discovered that cold heightens and heat lowers the specific gravity of protoplasm in general, not excepting that of the parenchyma, that the molecular weight or density of our parenchyma and all the living protoplasm is increased by cold and decreased by heat. This is not a nervous effect but a direct responsive reaction of protoplasm, *per se*, as is attested by the fact that it is as marked in nerveless unicellular and multicellular organisms as in those of the highest types of nervous organizations. In a common cold the author says that primarily a condition of disequilibrium is produced. A subject, during a period of normal heat balance, gets wet, cold feet; a state of contraction of the tissues of the lower extremities is attained, the blood is ejected from the peripheral vascular areas to the more roomy reservoirs of the splanchnic veins, which readily dilate to receive it, with the result that a pernicious splanchnic venous stasis is produced, concurrent with a capillary and arterial blood deficiency in the extremities and with an inevitable suboxidation of the dependent tissues in the extremities. The author then describes the various stages through which such an affection passes. The usual treatment has been more or less successful in the past, but only with a vague idea of the pathology and etiology of the condition.

Anemia in Porto Rico.—The Anemia Commission reports further on its work in Porto Rico. The outdoor clinic was opened on June 1, 1905, at Aibonito. As soon as the principal station was thoroughly organized and in good running order, substations were opened at various other towns. The attendance of the patients at the clinics naturally fluctuated, but the majority attended regularly. Those from long distances were given enough medicine to last them for a longer interval than those patients who lived close at hand. A tent hospital of 60 beds was used for patients suffering from severe grades of the disease and for patients who had come great distances. This hospital also afforded opportunity to study and to keep under observation cases presenting symptoms of especial interest. The commission studied the effects of thymol and betanaphthol in the treatment of this disease, and their relative value is discussed. The commission states that the specific treatment of anemia in Porto Rico is beyond question. Both betanaphthol and thymol are excellent in their results and each, the commission states, has its special uses. The repeated use of these anthelmintics weekly for two or three months in cases in which there is intense anemia is not advised. Betanaphthol in these cases, by adding an element of irritation to an already diseased kidney, may aggravate the existing process. Thymol is less irritating, and the commission believes that consecutive doses of either drug is sufficient to bring the patient if not to a cure, at least to the assurance of a practical cure. The report refers at some length to the many "patent medicines," chiefly iron preparations, which are being sold in the island for the relief of this condition, and states that it should be remembered that these remedies are paid for from the earnings of a class said to be starving in poverty, and that the list of "sure cures," etc., is too long and too disgusting to contemplate without anger. The commission found that iron is of practically no value in the treatment of this condition except as it is of value in the after-treatment of malaria or of syphilis.

The Therapeutic Value of Alcohol.—A. D. Blackader (*Montreal Medical Journal*), does not consider alcohol an efficient cardiac or respiratory stimulant. In some conditions with a determination of blood to the interior of the body, the administration of alcohol by dilating the superficial vessels

and equalizing the circulation may be of considerable service. Alcohol is not a stimulant to the nervous system. Its action is that of a narcotic, relieving nervous strain, and promoting rest. No other narcotic can be used so freely with so few injurious by-effects. Alcohol in disease is a valuable food, replacing carbohydrates, and as a general rule saving proteid metabolism. It places no tax on the digestive organs; if used intelligently it increases their secretion. In low and asthenic conditions it may have also a favorable action on the hepatic cells, stimulating them to increased activity. In infections of all forms alcohol should be used cautiously. In large amounts it probably will do harm by destroying the resisting powers of the organism. The effect of alcohol varies much with the individual and its employment demands much discrimination and careful and frequent observation. Its prolonged use is liable to lead to degenerative changes in the heart, blood vessels, and secretory organs.

Profits from Dr. Pierce's Prescription.—At the trial in the libel suit brought by the World's Dispensary Association against the Curtis Publishing Company, the following figures were given by Lee H. Smith, vice president of the company, regarding the profits in the "Dr. Pierce's Favorite Prescription" business since 1899: 1899, $167,425.08; 1900, $188,607.09; 1901, $113,725.27; 1902, $143,731.86; 1903, $192,222.93; 1904, $78,241.72; 1905 (loss), $38,441.31. The sales from May, 1903, to May, 1904, amounted to $971,550.92; from May, 1904, to May, 1905, $752,935.97; decrease, $218,614.95. Sales from May, 1903, to December 31, 1903, were $585,735.41; and from May, 1905, to December 31, 1905, $447,655.98; decrease, $138,080.43. Total decrease in twenty months, $356,694.38.

Protection of Animals in Turkey.—The Constantinople correspondent of the *Lancet* states that the employment of senile, debilitated or diseased horses has been forbidden. The Turks, on the whole, are kind to animals, and at almost every house in Stamboul there is a receptacle of some kind which is kept full of water for the use of the innumerable street dogs. The *Lancet* states that a cabman who runs over one of these animals while it is taking a nap in the middle of the street is compelled to pay a fine, and that the Sultan is said to spend a large sum annually in feeding the numerous stray dogs round his kiosks and palaces.

Diagnosis of Liver Abscess.—Sexton says that more skill is required in diagnosing abscess of the liver than in diagnosing most other tropical diseases. The beginning of the abscess is often so obscure and its development so insidious that at times it is difficult to determine the presence of pus. Abscess of the liver, he states, may be confounded with intermittent malaria, typhoid fever, right-sided pleurisy, cancer of the liver, gallstones, suppurating hydatid cyst, and many other diseases.

Spermaceti to Help in Removal of Cysts.—Pozzi has recently called attention anew to the advantages of filling a thin-walled cyst with spermaceti as an aid in its removal. He first recommended it several years ago in his Handbook of Gynecology, and time has confirmed its value. The cyst is evacuated as usual and rinsed out. Melted spermaceti is then injected. By the next day the spermaceti inside the cyst has cooled into a hard ball so that the cyst can then be shelled out without the slightest difficulty.

Practice in Surgery.—Barbat, in the *California State Journal of Medicine*, states that no individual should attempt to operate who does not keep in constant training, either as an operator or an assistant, because his results will be bad, and he will bring legitimate surgery into disrepute.

Diet After Laparotomies.—Dr. W. B. Chase, in the *American Journal of Obstetrics*, declares that the diet of patients after abdominal section calls for the greatest circumspection. He advises following the rule that nourishment, by the mouth, before the stomach retains or digests it, is positively harmful.

Survival of the Fittest.—Dr. S. M. Miller, Knoxville, Tenn., states that the influence of selection in the improvement of strains is clearly observed along the entire developmental line from the lowest visible organism to the highest order of physical perfection.—*Southern Med. and Surg.*

Climatology.—Dr. F. G. Byles, Denver, declares that a physician should not prescribe a drug or medicine the physiologic action of which is unknown to him, and that it is equally important that he understand the physiologic action of a climate before prescribing for a patient in this respect.—*Colorado Med. Journal.*

Prognosis in Alcoholic Insanity.—Dr. C. L. Hamilton says that in the more acute forms of alcoholic insanity it is always best to give a guarded prognosis to the patient's family; at the same time, he says, they should be encouraged by the statement that a large percentage of these patients recover.—*Illinois Med. Jour.*

Society Proceedings

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Boston, June 5-8.
State Medical Association of Texas, Fort Worth, April 24-26.
Arizona Medical Association, Phoenix, April 24-25.
Medical and Chirurg. Faculty of Maryland, Baltimore, April 24-26.
Nebraska State Medical Association, Lincoln, May 1-3.
New Mexico Medical Association, Albuquerque, May 2.
American Therapeutic Society, New York City, May 3-5.
Oklahoma Medical Association, Oklahoma City, May 8.
Indian Territory Medical Association, Oklahoma City, May 8.
Utah State Medical Association, Salt Lake City, May 8-9.
Nevada State Medical Society, Reno, May 8-9.
Louisiana State Medical Society, New Orleans, May 8-10.
Arkansas Medical Society, Hot Springs, May 8-10.
Montana State Medical Association, Butte, May 9-10.
Kansas Medical Society, Topeka, May 9-11.
Ohio State Medical Association, Canton, Ohio, May 9-11.
American Climatological Assn., Atlantic City, N. J., May 12-14.
American Assn. of Physicians, Washington, D. C., May 15-16.
Missouri State Medical Association, Jefferson City, May 15-17.
Iowa State Medical Society, Des Moines, May 16-17.
North Dakota State Medical Association, Fargo, May 16-17.
New Hampshire Medical Society, Concord, May 17-18.
Amer. Assn. of Path. and Bacteriologists, Baltimore, May 18-19.
American Gynecological Society, Hot Springs, Va., May 22.
Illinois State Medical Society, Springfield, May 22-24.
South Dakota State Medical Association, Watertown, May 22-24.
Connecticut State Medical Society, New Haven, May 23-24.
Indiana State Medical Association, Winona Lake, May 23-25.
Michigan State Medical Society, Jackson, May 23-25.

AMERICAN SOCIETY OF TROPICAL MEDICINE.

Third Annual Meeting, held in Philadelphia, March 21, 1906.

DR. JAMES M. ANDERS in the Chair.

New Species of Parasite in Man.

DR. CHARLES WARDELL STILES, U. S. P. H. and M.-H. Service, described a parasite which is regarded as belonging to the family of filaria. It measures from 32 to 52 millimeters in length. It was found in Georgia and was taken from an ulceration of the leg. The only parasite which it most nearly approaches in similarity is one described for certain South American birds. He regards it as a tropical or subtropical parasite, of which Georgia will probably form the northern geographical border. It is immature as it occurs in man, and until the adult stage is observed he believes it impossible to say much concerning it. He regards the infection a surgical rather than a medical matter.

DR. JUDSON DALAND spoke of the prevalence of filaria on the eastern coast of India. The hospitals, however, do not show as many cases of filariasis as would be expected. This is because the patients do not apply promptly for aid.

DR. ALLAN G. SMITH questioned whether this new parasite should be regarded as definite for man and suggested the possibility of its presence in the local infection as accidental. He thought it probably is related to the hook-worm species. Had it gotten into the general economy he thinks it would have grown to a larger size than that attained.

Malaria in the Tropics.

COL. WILLIAM C. GORGAS, Chief Sanitary Officer, Isthmus of Panama, contributed this paper, which was read by Dr.

McFarland. Colonel Gorgas, since 1898, has served four years in Cuba and two years at Panama, part of the time with troops, but most of the time he has been connected with municipal sanitation. At Panama he is in charge of the yellow-fever wards, and all non-immunes with fever from any cause coming into Ancon Hospital are sent to these wards. The larger proportion of such cases are malaria, about 200 malaria being treated per month. His experience has shown that malaria in the tropics is by far the most important disease to which tropical populations are subjected. While the per cent. of fatalities is not nearly so great as from some other tropical disease, the degree of incapacity produced is much greater than that from all other diseases combined. At Santiago, while there were more deaths from yellow fever and typhoid than from malaria, it was the latter disease which prostrated the Army. Even at Havana, where malaria was by no means so general as would be expected, a greater number of persons died from malaria every year than from yellow fever. As a result of their mosquito work in Havana, the deaths from malaria, which for many years had averaged about 350, were 351 in 1901; 77 in 1902; about 50 in 1903; and since remained at about 40.

He regards Panama as favorable a place for the development of malaria as could be found. Three-fourths of the disability among the laborers are due to malaria. To correct this the greater effort was directed toward draining localities adjacent to towns and dwellings. In places that could not be drained oil was used very freely. An equally important measure is the giving of prophylactic doses of quinin. Thorough screening was also carried out. With 22,000 men on the pay-rolls during February, only 22 per 1,000 were incapacitated every day on account of sickness, three-fourths of which was due to malaria. In his wards at Ancon he has personally treated 1,055 cases of malaria in the last six months. In each case blood examinations were made and the character of the parasite recorded. The estivo-autumnal variety predominated, but the attacks, in general, were mild and yielded easily to treatment. Among the 1,055 cases there were only five deaths. There have been 20 cases of hemoglobinuric fever in the past eight months, with only three deaths. The treatment has been the persistent use of quinin, given for the first three or four days hypodermically, but as soon as vomiting ceases it is given by the mouth; 20 grains in the twenty-four hours, hypodermically, and 30 grains by the mouth, has been the ordinary course pursued. As sanitary conditions are improved, Colonel Gorgas believes it a rational hope that malaria will decrease in the same ratio.

Clinical Notes on a Recent Epidemic of Dengue Fever.

DR. ARISTIDES AGRAMONTE, secretary of the Board of Infectious Diseases, Havana, Cuba, contributed this paper, which was read by Dr. John M. Swan. He said that the city of Havana and neighboring towns suffered from a well-marked epidemic of dengue fever during last year. From the middle of September to the first of December he personally attended 154 cases, and saw many others in consultation. He questions whether the disease may not be endemic there, assuming epidemic form at long intervals. During the period referred to he has seen but few children attacked and no infants. The degree of immunity conferred by an attack of dengue he believes is slight. He has seen four instances in which the disease reappeared in the same individual after an interval which excluded the possibility of relapses.

All efforts to infect individuals by the bites of mosquitoes previously applied to cases of dengue fever have been unsuccessful. Notwithstanding this, the circumstantial evidence is directly in favor of insect transmission, and he believes that mosquitoes are responsible for the extensive and rapid propagation of the disease, and that the inability to demonstrate this theory is due to incomplete technic. Finlay for twenty years defended the same theory regarding yellow fever before it was demonstrated. The spread of dengue fever occurs much like that of yellow fever, from house to house, along the same side of the street, attacking more frequently the members of a family than the transient visitors. Observation of many of the cases indicates an incubation period of from three to seven days, but in one special case cited, the period of incubation seemed to be from thirty-six to fifty-six hours.

Cephalalgia, rachialgia and fever usher in the attack, and the eruption may be observed in eight cases out of ten. Dr. Agramonte remarked on a few of the clinical features which, in his opinion, have been treated with undeserved disdain or entirely overlooked. Among these is the eruption, which is seen most frequently. The character of the eruption is modified by the patients' complexion and surface conditions. In the case of a plethoric, blonde German woman the eruption was like that of scarlatina. In the African it is most puzzling, and this race has a marked degree of resistance against dengue fever. Albuminuria in a slight degree has been found in almost every case, disappearing rapidly with defervescence. Exceptionally the albumin in the urine has been in considerable quantity, precipitating by the "heat-and-acid" test, but rarely containing casts or epithelium. The early appearance of albumin in dengue he suggested might be considered a differential sign between this disease and yellow fever. Observation of the epidemic shows that an attack of dengue leaves the individual a fit subject for the acquisition of other severe infections. The mortality is regarded as low, for in an estimated population of 266,000 only six or eight deaths were directly attributable to dengue.

The diagnosis is not difficult when it is known that an epidemic exists, but it is most easily mistaken for yellow fever during the first forty-eight or seventy-two hours. Faget's sign is a fairly constant differential index; in dengue the tendency is for the pulse to correspond with the variation in the degree of temperature, although there is sometimes a comparatively slow pulse as a result of the generally depressed condition. A most careful and painstaking examination of cases can only help to differentiate these diseases.

Officers Elected.

The following officers were elected: President, Dr. Roland G. Curtin, Philadelphia; vice-presidents, Dr. Abraham Jacobi, New York; Dr. Aristides Agramonte, Havana, Cuba; secretary, Dr. Joseph McFarland, Philadelphia; assistant secretary, Dr. John M. Swan, Philadelphia; treasurer, Dr. Wharton Sinkler, Philadelphia; councilors, Dr. James M. Anders, Dr. Judson Daland, Dr. Thomas H. Fenton and Dr. B. F. Stahl, all of Philadelphia.

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, held Feb. 27, 1906.

The President, DR. P. K. BROWN, in the Chair.

Personal Experiences with Football Injuries.

DR. R. L. WILBUR described the football injuries that had come under his care for the past six years (omitting 1903), at the Leland Stanford, Jr., University. These included nearly all of the severe injuries and a large proportion of the minor ones. In the 88 individuals treated the most frequent injuries were the following: Fractures of the clavicle, 3; of both bones of the leg, 3; of the nose, 5; of the ribs, 5; sprained ankles, 6; severe knee injuries, 21; muscle tears, 5. The majority of the knee injuries were sufficiently severe to be followed by an effusion into the synovial sac. If seen within the first twenty-four hours these were treated by adhesive plaster tightly applied to the slightly flexed knee, and by rest in bed, elevation of the joint, cold locally, and a saline cathartic. After a few days a second bandage was applied, and if the knee appeared to be strong, a gap was left in the plaster posteriorly and the patient was allowed to walk with the aid of a cane. In ten days, in favorable cases, the player was able to do light work, but for three weeks or more the knee cap and the lateral portions of the joint were protected by adhesive plasters.

If the patient was not seen within the first twenty-four hours, a day elapsed before the adhesive bandage was applied, the treatment being otherwise practically the same as in the former case.

Sprains of other joints were treated on much the same lines as those of the knees. Muscle tears can be readily repaired by applying plaster in the direction of the muscle fibers and

binding them down with circular strips. After three to six days, active work can be resumed without removing the bandage. In the author's experience early rest and ambulatory treatment with adhesive bandages gives as good final results as where the injured muscles or joints are treated along more conservative lines. The injuries seemed to follow "open plays" about as frequently as "mass plays."

DR. A. B. SPALDING said that one reason why football injuries are so frequent is that the coaches urge the players to overlook injuries of all kinds. Furthermore, when an injury occurs, the coach does not allow the player to take proper care of himself. He mentioned a case in which a sarcoma developed in a subcutaneous clot, apparently on account of lack of care. The game should be more carefully supervised by physicians. The open game is quite as dangerous as the closed game.

Abdominal Exploration.

DR. C. M. COOPER stated that the mortality in diagnostic operations, even in large hospitals, is estimated at from one to two per cent., and that the mortality in private practice, by unskilled operators, is unquestionably higher. He believes that the peritoneal adhesions which sometimes follow these operations are less frequently due to the exploration itself than to some condition of sepsis that was already present before the operation. An exploratory operation should never be undertaken until all other diagnostic means have been exhausted. Many useless operations might thus be avoided. Furthermore the diagnosis may not be cleared up by the exploratory operation; and many patients have been closed up on account of supposed cancer, where the later developments showed that some other condition was present. In spite of these objections, exploratory operations are frequently indicated.

Examples of indications for operation are as follows: Stomach trouble with continued absence of free hydrochloric acid and the presence of lactic acid and the Oppler-Boas bacilli; or stomach trouble with continuous delay in emptying; or dyspepsia developing in middle life that does not yield to well-directed medical treatment, especially if anemia, wasting and occult blood in the stools are present.

DR. F. B. CARPENTER stated that continued pain is often an indication in itself for an exploratory operation. Adhesions may be found in such cases, and by breaking up these the pain may be relieved.

DR. TERRY advocated a long incision for exploratory operations long enough so that the operator may put his hand through with comfort. Sometimes continued pain is due to lesions of the solar plexus and surgical intervention is then of no avail.

DR. GEORGE B. SOMERS believes that the exact diagnosis is often of less moment as a guide to operation than are general indications. For example, it makes very little difference whether we operate on an ovarian or a tubal abscess. In either case the operation is indicated.

MEDICAL JURISPRUDENCE SOCIETY OF PHILADELPHIA.

Regular Meeting, held March 19, 1906.

The President, DR. HENRY W. CATTELL, in the Chair.

Quackery: What Are We Going to Do About It?

MR. CHAMPE S. ANDREWS, counsel of the Medical Society of the County of New York, described the laws of that state and their successful application against illegal practitioners in the metropolis, and gave suggestions for similar action in Philadelphia. A great cause of surprise, he said, is the fact of the different classes of society interested by the quack: The lawyer from one view; the doctor from an entirely different standpoint; the student of religions from a still different view. There is much to attract the sociologist and the criminologist. Among the different branches of the healing art which the quack takes up were mentioned those of the oculist, the hydropath, the electropath, the fraud pure and simple, who claims to be a physician; the osteopath, the vitapath; the fraud who practices on the consumptive poor; the so-called specialist in diseases of men; the patent-medicine quack.

Mr. Andrews recounted specific instances of quackery and of arrests. One instance was that of a Mrs. Browning Weaverson, who belonged to a cult which claimed to cure disease by the application of human waste. The patient was a woman, 60 years of age, with cancer of the leg. For five days a plaster, composed of human waste of the patient, had been applied. Gangrene had set in and the patient was at the point of death. Another was that of a Jew named Benjamin, who practiced among the women of the East Side, claiming to have a drug which cured sterility. About 25 women had appeared in court who had taken the drug, the effect of which was to cause a swelling of the abdomen.

The midwives were said to be the most difficult class of quacks to convict. They are most effectively reached through the postoffice authorities. The water-cure fad seems to dominate the German section. A curious fact brought out in these trials is that almost every quack when brought into court has somebody who has been deceived into believing that they have been greatly benefited. Among the electropaths was one Roher, who had established a diploma mill operating chiefly among Swedish immigrants. Fifty of these graduates had been convicted. Rohrer was himself the head of what might be called the massage trust of New York. He is an example of the men who use electricity and claim that they are free from the medical law. In this class are the quacks who have the so-called electric-chair, electric shoes, electric trusses, "magic boots," etc. An account was given of the quack who had represented himself as being associated with the celebrated Dr. Koch. Action has been brought against him which will make impossible the existence of the Koch lung institutes.

A case of special interest was that of a carpenter, rejected for life insurance on account of a slight condition of the kidneys, who had fallen into the hands of one Kane who was professing to cure by the use of radium. He greatly exaggerated the man's condition, but said that if he could afford to buy of him a certain quantity of radium, which would cost $10,000, he could cure him. The man actually did get together $9,872, which he paid the quack, being treated for about a year. An arrest followed for grand larceny and the man is now serving a term in the penitentiary. A vial filled with greenish colored fluid, claimed to be the so-called radium, and which had been taken from the safe of the quack, was shown. The vial was about an inch and a quarter in diameter, and the part which was said to cost $10,000 was about an inch in depth.

The professional abortionist will not give drugs because this makes his conviction easy. Mr. Andrews said that when every state shall have a comprehensive medical law the profession will have a medical instrument which will enable them to check the practice of almost every class of medical quackery, except the man who is a charlatan inside of his own profession. In referring to the attitude of the newspapers toward quackery, it was the opinion of Mr. Andrews that in their acceptance of the advertisements of the so-called specialists in diseases of men, abortionists and patent-medicine dealers, active assistance is given to the evil. He believes the time will come when the newspapers will be obliged to give up these advertisements, as some are now voluntarily doing. The President of the Board of Health of New York has sent to the County Society over 100 complaints against illegal practitioners. A police officer is detailed to the work of the society and does nothing else. The court sets aside a day in the week for the trial of these cases. There is the problem of much work to be done with but a small amount of money, but Mr. Andrews believes that the profession of New York will awake to the necessity of asking the general public to contribute toward the carrying on of the work which in reality affects the general public more than the profession. While much has been accomplished, Mr. Andrews believes that if the work were neglected for twelve months the city would be again overrun with quacks. He believes there should be some organized body behind the movement, some concentric effort made to enforce the laws. He urges the formation of an organized body with a charter under the general corporation laws of one of the states. Should the American Medical Asso-

ciation, organized as it now is in every state of the Union, undertake the splendid work of suppressing the quack, he believes the effort would be attended with much success.

DISCUSSION.

DR. SAMUEL G. DIXON, Health Commissioner of the State of Pennsylvania, thought the time has come when the members of the profession should present to the legislature a bill empowering the State Medical Examining Board to revoke the license of a physician practicing as a charlatan or a quack. Physicians should take as much pride in having a high standard of honesty and honor in the profession as do the members of the Bar. In his opinion the law-makers are ready to pass laws forbidding the sale of medicine unless the formula is printed in full.

DR. JOHN B. ROBERTS did not believe that the patent-medicine or quack evil is entirely a disease of the community, but a disease, to a certain extent, of the medical profession. The ease with which the public is duped by those whom intelligent men in general call quacks, is partly the result of quackish men in the professional ranks. The essence of quackery is a boastful assertion of skill and infallibility, and a desire to obtain large sums of money for treating disease. The sick often seek the advertising doctor and believe the false assertions of the patent-medicine label, because they have found the medical men known to them to be incapable, inefficient, or so exorbitant in fees that help seems impossible at their hands. The family which can obtain efficient medical aid for a moderate fee near its home does not often drift into the hands of the recognized quacks.

The college which graduates an ignoramus, the state examining board which gives a license to an unfit applicant, and the physician who places an unjust value on his services, or who deceives his confiding patient are potent agents in encouraging quackery. Some years ago, he said, the alumni of various medical schools were obliged to compel their alma maters to stop the output of half-educated graduates, and the profession has had need to be on the alert that medical examining boards do not permit improper men to obtain licenses to practice. These sources of supply of *quasi* physicians, Dr. Roberts said, have now been pretty satisfactorily checked. There remain, however, the secret remedy prescribers, the commission-giving consultant, and the big fee doctors to be disciplined by the medical profession itself.

DR. HENRY BEATES said that the inability to successfully carry out the prosecution of quacks is due to the feebleness of the act of Assembly governing such matters. Efforts have been made to so amend the present law that to the usual fine there should be added a term in the penitentiary; also conferring the power to revoke the license of a practitioner who carries out quackish methods. These attempts to elevate the standard have met with opposition from every commercial medical college in the state of Pennsylvania. Dr. Beates strongly urged the organization of a movement to correct the evil of quackery.

THOMAS W. BARLOW, ESQ., of the Philadelphia Bar, said that if an organized effort were made to prosecute offenders in Philadelphia as is being done in New York, there must of necessity be a change in the police rule; for, while in New York a day each week is given by the courts to the work of the society, in Philadelphia, were an arrest made, it would take from thirty to sixty days to secure an indictment and probably six months to obtain conviction.

DR. S. SOLIS COHEN said that it is especially difficult to control the evil when men who are looked up to as leading lights, founders of colleges, etc., use their political influence against the effort. The medical profession, as a whole, and the medical press in particular, are not free from contamination with the patent-medicine evil. He expressed the hope that those interested, not of the medical profession, will point out to the newspapers the wrong they are doing in printing objectionable advertisements. Until the medical press is clean, the profession can not work in this direction. He doubts whether the American Medical Association is the body to lead in an organized movement against quackery, although it might properly co-operate with a national body, such as Mr. Andrews suggested, and that it would be quite proper for the Philadelphia County Medical and other bodies of physicians interested in the work to co-operate individually and collectively with such an organization. Regarding the suggestion of so amending the medical laws that a license may be revoked, he thought it would be injudicious to place such power in the hands of any other body than a court of law, and that a license should be revoked only by order of court after a full judicial hearing.

DR. PERSIFOR FRAZER said that there are many quacks in geology and chemistry as in medicine. They are not, however, so well known. He endorsed the suggestions made by Mr. Andrews.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Scarlet Fever.

In the treatment of scarlet fever, C. F. Shollenberger, in the *Denver Medical Times*, states that there is no disease of infancy and childhood in which so much care is necessary in the treatment as scarlet fever. The important things to observe are to prevent complications and sequelæ, which so frequently arise during the convalescent period of scarlet fever unless exceedingly great care is observed. The patient should be instructed to remain in bed at least a week after the temperature has entirely subsided, and to continue on a liquid diet, preferably milk, for two weeks longer. During the active stage of the disease, whether mild or severe, the secretions from the nose, throat and mouth should be removed on pieces of linen and immediately burned. The fecal and urinary discharges should be disinfected, and any discharge from the ear after being removed by absorbent cotton should at once be destroyed. All linens, towels and bedding should receive thorough disinfection before being taken from the room. The feeding utensils should be properly sterilized, and after the removal of the patient the sickroom should be thoroughly disinfected by means of sulphur or formaldehyd gas. For the purpose of disinfecting the bed, furniture and feeding utensils, a strong solution of carbolic acid, 1 to 20, or corrosive sublimate, 1 to 200, should be used. All books and toys which have been in the sickroom should be thoroughly disinfected or destroyed. Failure to observe any or all of these precautions has produced a great many deaths.

The atmosphere of the sickroom should be kept pure and fresh and at a temperature of from 65 to 70 F., avoiding all exposure to draughts, either directly or indirectly. This author recommends that a sponge bath be given to the patient once or twice a day, and that during the period of desquamation or at any time when excessive pruritus is present, some soothing lotion should be applied to the entire body. For this purpose he recommends the following combination:

℞. Menthol	gr. x	65
Unguenti zinci oxidi	ʒss	15
Lanolini q. s. ad to make	ʒi	30

M. Ft. unguentum. Sig.: Apply locally to the surface of the body.

The diet, of course, should be nutritious but mild, as has already been stated, consisting preferably of milk.

The medicinal treatment must be symptomatic, as no specific treatment has yet been discovered. Hydrotherapy is the best means of reducing the temperature, applied in the form of cold sponging, the cold wet pack or cold bath, depending on the individual case. Ice bags applied to the head are very serviceable. In giving the bath Shollenberger advises that the water be at first made lukewarm and gradually cooled until the desired temperature is reached. If active delirium is present and can not be controlled by hydrotherapy, potassium bromid or chloral hydrate may be given internally. In the treatment of the throat older children and adults may use some mild antiseptic gargle, while in young children spraying

should be employed. In the line of general treatment there is nothing better, he states, than the tincture of the chlorid of iron, especially when the stomach is in good condition. This preparation may be given in doses of from 3 to 10 minims each, and repeated every three hours, depending on the age of the patient. If the heart shows any signs of weakness, whisky, brandy or port wine is recommended as a stimulant, or strychnin sulphate in doses of 1/140 to 1/100 grain each, and repeated in from three to six hours.

COMPLICATIONS AND SEQUELÆ.

To prevent otitis media thorough irrigation of the fauces should be followed out. The younger patients will resist this irrigation of the fauces, and under such circumstances good judgment must be used as to the carrying out of this treatment. If the signs of otitis media arise, such as earache or pain referred to the ear, the instillation of hot water may be all that is necessary to relieve the distress. If this should not be sufficient, however, a solution similar to the following may be instilled into the ear:

℞ Tincturæ opii
Solutio cocainæ, 5 per cent., āā.....ℨss 2|
M. Sig.: Instill one or two drops into the affected ear.

The hot water bottle or hot salt bag should be applied externally. If pus is present the tympanic membrane must be incised. The ear should then be irrigated three times a day with a 5 per cent. solution of hydrogen peroxid, and if this discharge should persist after convalescence, irrigation must be continued at least twice a day until the pus has ceased to flow.

Enlargement of the glands of the neck is another very painful complication, and, according to this author, must be treated by the application of ice bags or cold cloths locally. If relief is not obtained within forty-eight hours hot poultices should be applied, and if there is any evidence of pus formation, a free incision, followed by sterilized irrigation and dressing, is necessary.

Arthritis as a complication frequently yields, without much stubbornness, to local treatment. For this purpose he recommends the following combination:

℞ Tincturæ aconiti .....ℨss 15|
Tincturæ opii
Spiritus chloroformi, āā.....ℨvi 24|
Linimenti saponis q. s. ad to make.....ℨiv 120|
M. Sig.: To be applied locally three or four times a day. The affected joints should be wrapped in absorbent cotton after the foregoing application has been made.

Although he does not regard this condition as a true rheumatic arthritis, he recomends small doses of sodium salicylate in such conditions.

When great gastric irritability is present, together with an accompanying enteritis, and the vomiting becomes excessive and continuous, he recommends large and frequent doses of bismuth subnitrate. In some cases minute doses of cocain may be given. The ice bag or mustard plaster applied to the epigastric region are of great service. Rectal feeding must be employed until the vomiting ceases, when the feeding by the stomach must be very gradually resumed.

Nephritis is the most severe and common complication of scarlet fever. Consequently, daily examination of the urine must be made for several days after convalescence has taken place. If there is any sign of disturbance of kidney secretion, diaphoresis may be employed by means of baths, hot packs, hot air, and hot drinks in small amounts. When marked dropsical effusion is present the free use of a hydragogue cathartic is indicated, and he recommends for this purpose the compound jalap powder. In order to render this more palatable for young children Shollenberger states that a cream-of-tartar lemonade may be substituted and sweetened and flavored with mild claret or wine. After the active congestion of the kidneys has been reduced, a stimulating diuretic should be given, and the following combination is recommended:

℞ Potassii acetatis .....ℨii 8|
Infusi digitalis .....ℨiii 90|
M. Sig.: One teaspoonful every four hours.

Flaxseed or mustard poultices placed over the region of the kidneys will often produce a stimulating effect, and assists in relieving the backache which is so frequently present. Some authorities recommend the local application of leeches over the kidneys, and others recommend dry cupping. Both of these are often objectionable to children.

If uremic convulsions should arise energetic diaphoresis must be procured. During the convulsion chloroform may be used to allay the violence of the attack; otherwise large doses of bromid or chloral hydrate will suffice.

D. R. Lucy, in the same periodical, recommends the following combination for general systemic treatment of scarlet fever, beginning about the second day:

℞ Tincturæ ferri chloridi.....ℨii 60
Potassii chloratis .....ℨi 4|
Glycerini
Aquæ, āā, q. s. ad to make.....ℨiv 120
M. Sig.: Take one teaspoonful in water every two hours.

Zinc Preparations.

In the treatment of herpes zoster the *American Journal of Clinical Medicine* recommends the use of zinc phosphid (U. S. P. 1890) as one of the most efficient remedies. As to its method of action, it is assumed that this preparation acts as a nutrient and relieves the condition by improving the deranged nutrition of the affected nerve tissue. Acting on this principle, the preparation has been used in numerous cases of stubborn neuralgia, in excessive hyperesthesia, and in other diseases of the peripheral nerve tracts, with marked success. It is suggested in this connection that the entire group of diseases following degeneration of the various tracts in the spinal cord, of which tabes dorsalis is one, the wet brain of alcoholics, general paresis, and neurasthenia are others, may be successfully treated by this preparation. As to the dosage one-sixth grain is the average dose for an adult, to be given one hour before each meal and just before retiring. The object of the time of administration is to avoid having the remedy broken up by the digestive fluids, with the evolution of phosphuretted hydrogen, and nauseous eructations, which are very unpleasant to the patient. In this size of dose it probably should not be continued for a longer period than one week at a time, each month.

In cases of epilepsy the zinc oxid pill is recommended by Gowers and Beevor when the bromids do not act properly.

In cases of heart complications with aortic regurgitation the following is recommended:

℞ Zinci phosphidi (U. S. P. 1890)...gr. 1/8.. |008
Ext. gentianæ q. s.
M. Ft. pillula No. i. Sig.: One such pill three times a day.

In hysterical affections the following is of value:

℞ Zinci valerianatis.....gr. iii |20
Pil. asafetidæ co. (B. P.).....gr. ii |12
M. Ft. pil. No. i. Sig.: One such pill twice a day.

Medicolegal

Sudden Giving Way of Foot Not a Disease.

The Supreme Judicial Court of Massachusetts says, in the case of Noyes vs. Commercial Travelers' Eastern Accident Association, that the plaintiff, a man 76 years of age, was on the platform of a railroad station, about to take a train which was entering the station. He walked forward on the platform, near the side of the train, before it stopped, with a view to taking a forward car, when suddenly, without any apparent cause, "his right foot gave way," and he fell, coming in contact with the train, and his foot was crushed. On this description of the accident it could not be said as a matter of law that he was negligent. His foot had never before given way in a similar manner. So far as appeared, the injury was entirely acidental. In this particular the court could not rule that the accident prevented him from recovering on his contract with the association. Nor could it be said, as a matter of law, that such a disorder as the sudden giving way of his foot, without apparent cause, was a disease, within the meaning of the contract, such that he was precluded from recovery for that reason.

Condition of Family and Patients No Ground for Bail.

The Supreme Court of Mississippi says, in Winegarden vs. State, where the former was convicted of grand larceny, that, in an affidavit he made in support of an application for bail pending an appeal, he set forth, besides bad health in himself, that his family, a wife and daughter, were in poverty; that he was their only means of support; that his daughter had been an invalid for years, and needed his medical care, he being a physician who understood her case better than any one else; that he was in large practice as a doctor of medicine, making a specialty of diseases curable by medicine concocted by him from "native herbs and roots"; and that his large number of patients needed him very much at that time, and he thought that many of them would never be cured if they were deprived of his medical attention. The court says that it had deep sympathy for his family; but it was certain that their condition furnished no ground, under the law, on which to base an order of bail. The same was true of the deprivation of his services to his patients, to whom the court could extend its condolence only.

Power of Patient to Waive Statutory Privilege.

The Appellate Court of Indiana, Division No. 2, says, in Metropolitan Life Insurance Company vs. Willis, that in an application for insurance the insured "expressly agreed and stipulated that in any suit on the policy any physician who had attended him might disclose any information acquired by him in any wise affecting the declarations and warranties" made in the application. But when a physician was called as a witness objection was made that he was not competent to testify and answer the question as to the disease that the insured was afflicted with when he was called to visit him because it was a privileged communication between physician and patient. The court holds that it was error to exclude the evidence. It says that the Indiana statute which makes inviolate matters communicated by a patient to his physician in the course of his professional business has always been strictly construed, and the rule is that such confidential relations will be protected by the courts, except where the patient consents to their revelation by the physician. In Penn Mutual, etc., Company vs. Wiler, 100 Ind. 92, it was said: "Notwithstanding the absolutely prohibitory form of our present statute, we think it confers a privilege which the patient, for whose benefit the provision is made, may claim or waive it." Here the assured, by an agreement in writing, waived this statutory privilege, and this court has no doubt but that he had a right to do so. His waiver must operate as such to those claiming under him.

Corporations Barred from Doing Professional Business.

The Supreme Court of Ohio holds, in the case of State vs. Laylin, that a foreign corporation, the sole business of which, as authorized by its charter, is that of defending physicians and surgeons against civil prosecution for malpractice, which, in the prosecution and conduct of said business, issues and sells to members of the medical profession a contract whereby it undertakes and agrees to defend the holder of said contract against any suit for malpractice that may be brought against him during the term therein specified, but does not assume, or agree to assume or pay, any judgment that shall be rendered against him in such suit, is not engaged in the business of insurance, nor is the contract so issued and sold an insurance contract. But a foreign corporation, created for the purpose of engaging in and carrying on such business, is not entitled to have or receive from the Secretary of State of the State of Ohio a certificate authorizing it to transact such business in that state, for the reason that the business proposed is professional business, and as such is expressly prohibited to corporations by section 3235 of the Revised Statutes of 1903. It was urged that the company, being a corporation, an impersonal entity, could not and did not itself engage in the practice of law or the management and conduct of defenses in suits at law, but in what it did, or obligated itself to do, it undertook only "to act as the agent of the contract holder in retaining legal counsel, and in managing and maintaining the defense of the suit." But the court says that if this be not the engaging in or carrying on of professional business, then it would be difficult to conceive how professional business could be engaged in or carried on by a corporation. The conclusion reached, it further says, rendered it unnecessary to consider the question suggested that the contract issued and sold by the company was a contract, the making of which was against public policy, because of the stipulations and provisions therein contained, restricting the right to compromise.

Suggestion as to Instructions on Expert Testimony.

The Supreme Court of Missouri, Division No. 2, says, in the case of State vs. Wertz, a prosecution for rape, that part of the instruction given the jury was as follows: "Whether the hypothetical case on which the opinions of the experts are based corresponds to and coincides with the facts given in the evidence the jury alone must determine from the evidence produced in this case. And, if the jury finds such hypothetical questions supposed facts not given in evidence, they, together with the opinions of the experts based thereon, should be entirely disregarded by the jury in making up their verdict." It is clear that, if the hypothetical case on which the opinions of the experts were based did not correspond to and coincide with the facts given in evidence, the court should have excluded the questions and answers to such hypothetical questions; and this error was emphasized by the additional direction to the jury that they must determine whether there was any evidence upon which to base such hypothetical questions. This direction to the jury was manifestly erroneous and constituted reversible error.

Again the Supreme Court feels constrained to suggest to the trial court the propriety of following the old landmarks. The law on the subject of expert testimony has been repeatedly and correctly declared by the courts of Missouri, and such declarations have uniformly met the approval of this court and should be regarded as well-established precedents. Where medical experts testify in a case, it is usual and common for the court, in directing the jury as to the credit and weight to be given to such testimony, to simply say to the jury, by its instructions, that "the opinions given by the medical experts in this cause are testimony before you and subject to the same rules of credit or discredit as the testimony of other witnesses. The opinions neither establish nor tend to establish the truth of the facts upon which they are based. Whether the matters testified to by the witnesses in the cause as facts are true or false, is to be determined by the jury alone. Neither are the hypothetical questions put to the medical experts by the counsel in the cause evidence of the truth of the matters stated in these questions." An instruction substantially in this form would have covered the entire subject of the expert testimony given in this cause.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

April 7.

1 *Prevention and Treatment of Pneumonia. B. Robinson, New York.
2 *Synthetical Medicine. E. C. Savidge, New York.
3 The Hippocratic Era in Medicine. R. C. Newton, Montclair, N. J.
4 Plea for More Conservative Examination in Suspected Cases of Pulmonary Tuberculosis. C. C. Keeler, Denver, Colo.
5 *Intraligamentous Drainage for Non-suppurating Parametritis. L. F. Garrigues, New York.
6 Football and Moral Health. W. L. Howard, Baltimore.
7 Chorea and Some Disorders Simulating It. A. A. Eshner, Philadelphia.

1. **Prevention and Treatment of Pneumonia.**—Robinson claims that with the appearance of the first symptoms of pneumonia beechwood creosote should be vaporized more or less continuously in the patient's room. At frequent intervals the inhalations are stopped and the windows opened wide. Draughts must not be tolerated, although perfect ventilation is insisted on. Robinson regards creosote as the most useful single agent in the treatment of pneumonia, as a preventive and curative, if given properly and if continued for a sufficient length of time.

2. **Synthetical Medicine.**—The title of Savidge's paper is misleading inasmuch as it does not deal with synthetic remedies, as one naturally would suppose. The author says that synthetical medicine attempts to recognize and to postpone the future trouble which is menacing each individual.

5. **Intraligamentous Drainage for Parametritis.**—Garrigues made use of the following method in two cases of parametritis with very satisfactory results: After curetting the uterus, the cervix is drawn toward the healthy side, and a bullet forceps is inserted in the vagina to the side, and slightly posterior to the cervix, so as to put the vagina on the stretch. An incision, about three-fourths of an inch in length, is made through the vaginal wall, close to the uterus. Through this incision the forefinger is inserted, and, keeping close to the uterus, is pushed well up between the layers of the ligament into the hard parametrium, and then outward, so as to open up the mass freely for drainage. Should the Fallopian tube be much swollen it is opened by means of a blunt forceps under the guidance of the index finger. A good sized tube is introduced, either into the parametrium or into the tube, as the case may be, and the operation is complete. He advises against the use of sharp perforators, scissors, etc., the finger being the most accurate and harmless instrument that can be used. The operation is said to be not dangerous, usually not very difficult, and the results certain and satisfactory.

Boston Medical and Surgical Journal.

April 5.

8 Mental Symptoms of Cerebral Tumor. P. C. Knapp, Boston.
9 Operation for Cataract. F. E. Cheney, Boston.
10 *The Early Diagnosis and Aggressive Treatment of Pulmonary Tuberculosis in a Large Out-patient Clinic. J. B. Hawes, Jr., Boston.
11 *A New Needle Holder. J. D. Barney, Boston.

10. **Treatment of Tuberculosis in the Out-Patient Clinic.**—Hawes directs attention to the harm done to patients with phthisis by the treatment ordinarily given in out-patient clinics. The great difficulty is not that there is any lack of willingness on the part of the physician, but that the patients will not co-operate with him in his efforts to get at the trouble. Sometimes, however, by waiting until the diagnosis of tuberculosis is proved by the demonstration of tubercle bacilli, those in charge of out-patient clinics are sometimes responsible for the death of the patient. Hawes emphasizes that there must be an aggressive personal interest on the part of the physician in charge; that he must himself take the initiative, educate and encourage the patient and hustle for his future good even when the patient is listless and indifferent. Every effort should be made to diagnose the disease early, before bacilli appear in the sputum, by careful temperature records kept by the patients themselves, by the use of tuberculin, and by mensuration and spirometry. By doing this much good can be done in the treatment of tuberculosis in the out-patient department.

11. **New Needle Holder.**—The particular advantages of the instrument devised by Barney are: 1, Curved needles are gripped too securely to turn over; 2, needles are not broken.

New York Medical Journal.

April 7.

12 *Endothelial Spindle-Celled Sarcoma of the Dura Mater Penetrating the Brain. I. W. Blackburn and W. H. Hough, Washington, D. C.
13 Ascending Myelomalacia Caused by a Progressing Venous Thrombosis. M. G. Schlapp, New York.
14 Acute Intestinal Obstruction. H. Lilienthal, New York.
15 *The Vasomotor Factor in Asthma. F. Hare, London, England.
16 *What Causes the Pylorus to Relax? A. L. Benedict, Buffalo.
17 *Treatment of Diffuse and General Peritonitis, with Special Reference to the Murphy Method. J. H. Gibbon, Philadelphia.
18 Functional Heart Murmurs. R. Ellis, New York.
19 Motor Ocular Paralysis as a Complication of Acute Articular Rheumatism. L. Street, Kyoto, Japan.

12. **Sarcoma of Dura Mater.**—In the case described by Blackburn and Hough, the tumor originated from the dura mater just in advance of the sella turcica, and at the posterior inner angle of the orbital plate of the right frontal bone. As it grew upward it penetrated the brain and formed a large cavity in the base, mainly in the orbital surface of the right frontal lobe. In its invasion of the brain it destroyed both olfactory tracts, nearly destroyed the optic nerves and chiasm and thrust the cerebral structures before it, becoming almost wholly imbedded within the brain substance, yet the growth had no organic connection with the brain except slight incorporation with the leptomeninges.

15. **Vasomotor Factor in Asthma.**—Hare states that the meaning and mechanism of many asthmatic paroxysms may be summarized as follows: 1, Hyperpyremia; 2, widespread vasoconstriction compensated for by bronchial vasodilatation, or the converse; 3, vascular distension of the mucosa of the bronchioles; 4, obstructive dyspnea; 5, exaggerated combustion (catabolic expenditure); 6, gradual dispersion of hyperpyremia; 7, cessation of the vasomotor variation; 8, subsidence of vascular distension and asthmatic paroxysm.

16. **Relaxation of Pylorus.**—Benedict summarizes his objections to the acid theory of relaxation and closure of the pylorus as follows: 1. The local changes in reaction are physiologically inevitable. 2. The relative acidity of the chyme is not diminished by the passage onward of a small portion, yet the pylorus does not remain patulous. 3. While this failure of a continuous relaxation of the pylorus may be explained by the distal acidity, it is in close analogy with the action of other alimentary sphincters, which close without any exciting reflex that can be ascribed to differences in chemical reaction. 4. Fully half the stomach contents normally escape before it is conceivable that any great proportion of hydrochloric acid is present. 5. Clinical experience with dietaries shows that, other things being equal, meals that call for considerable hydrochloric acid secretion usually remain in the stomach longer than those which do not. 6. Clinical experience with stomach contents proves conclusively that deviation from the normal standard of hydrochloric acid secretion produces just the opposite effect to that which would be expected if this were the cause of pyloric relaxation. Even in achylia gastrica, there is no necessary abnormality of pyloric function, certainly not in the direction of retention.

17. **Treatment of Peritonitis.**—Gibbon subscribes to the value of the drainage treatment of peritonitis as outlined by Murphy. He believes that the Ochsner treatment of diffuse peritonitis is indicated in every case of appendicitis in which it is impossible to operate immediately, and after the removal of the appendix and the establishment of drainage.

Lancet-Clinic, Cincinnati.

April 7.

20 Asepsis in Obstetrics. J. M. Withrow, Cincinnati.
21 The Borderland of Disease. C. Pope, Louisville.
22 Later History of a Case of Cerebral Abscess. J. C. Oliver, Cincinnati.
23 Mercenary. E. S. M'Kee, Cincinnati.

University of Pennsylvania Medical Bulletin, Philadelphia.

February.

24 *Metrorrhagia Myopathica. B. M. Anspach, Philadelphia.
25 Fractures of the Humerus by Muscular Violence. A. P. G. Ashhurst, Philadelphia.
26 Philip Syng Physick; A Sketch. R. H. Harte, Philadelphia.

24. **Metrorrhagia Myopathica.**—Under this term Anspach describes a condition which hitherto has been variously and incorrectly grouped under apoplexia uteri, senile endometritis, and preclimacteric bleeding. It is a symptom dependent on an anatomic or physiologic lesion of the uterine muscle which has not yet been demonstrated. He thinks that the anatomic lesion will probably be found in the elastic tissue constituents of the vessel wall and the subserous and supravascular layers. The physiologic lesion is most likely an insufficient contractile power of the uterus. The condition does not occur in nulliparous women, and, therefore, it must have some connection with the child-bearing process. The uterus is enlarged and softened; the os is patulous. The diagnosis of the metrorrhagica myopathica is only justified when all other possible causes for uterine hemorrhages have been excluded. This is especially urgent in reference to carcinoma. While curettement, atmocausis, etc., have little effect in treatment Anspach states that palliative measures should always be tried before resorting to hysterectomy. Obliteration of the endometrial cavity by means of destructive atmocausis is the alternative of hysterectomy in these cases. It is harder to perform correctly, however, and is more dangerous than hysterectomy, which is the operation of choice.

Bulletin of the American Academy of Medicine, Easton, Pa.
February.

27 *Influence of Recreation on the Individual and the Community. G. W. McCaskey, Ft. Wayne, Ind.
28 *Recreation in Its Effects on the Nervous System. W. J. Herdman, Ann Arbor, Mich.
29 *Ceremonials and Festa in the Recreation of Larger Groups of Individuals. B. Holmes, Chicago.
30 *Relation of Recreation to Education. R. K. Row, Berwyn, Ill.
31 *Recreation as a Sociologic Factor. D. C. Hawley, Burlington, Vt.
32 *Medical Features of the Papyrus Ebers. C. H. v. Klein, Chicago.

27-31.—See abstracts in THE JOURNAL, Nov. 25, 1905, pages 1684-1685.

32.—See article in THE JOURNAL, Dec. 23, 1905, page 1928.

Archives of Pediatrics, New York.
March.

33 Citrate of Soda in Infant Feeding. H. L. K. Shaw, Albany, N. Y.
34 Barlow's Disease (infantile scurvy) in the Island of Cuba. J. L. Duenas, Havana, Cuba.
35 *Hypertrophic Stenosis of the Pylorus, Operation, Recovery. J. Rogers and J. Howland, New York.
36 *Fat Problems and Goat's Milk in Infant Feeding. J. F. Bell, Englewood, N. J.
37 Diagnosis and Treatment of Chronic Polyarticular Diseases in Childhood. P. W. Nathan, New York.

35. **Hypertrophic Stenosis of Pylorus.**—Rogers and Howland report a successful operation on an infant three months of age, suffering from hypertrophic stenosis of the pylorus. The symptoms were typical. A posterior gastrojejunostomy, without a loop, was carried out with sutures. The length of the operation was twenty-five minutes.

36. **Fat Problems in Infant Feeding.**—As the result of clinical observation and experimentation Bell concludes that the digestion of fat retards the flow and diminishes the amount of gastric juice, at the same time lowering its digestive power. The ingestion of fluid oil increases the flow of pancreatic juice and probably the activity of its fat-splitting enzyme, steapsin. In case the fat is not fluid at body temperature, he states, it may still further retard and prevent the flow of gastric juice, coating over the gastric mucous membrane, thereby mechanically interfering with secretion. In the case of coagulable food, such as caseinogen, it may cover the curds with a layer of insoluble fat, thereby preventing the action of gastric juice on them, though the juice be secreted in sufficient amount and power, and also by preventing the action of the trypsin on them, though brought in contact with an increased supply of pancreatic juice, assuming that the action of the steapsin on the fats will be partially *nil*, or at least much impeded by the insolubility of their fat-covering permitting the curds to pass undigested. If goat's milk fat more closely approximates human milk fat than that of cow's milk, and if the proteid and sugar constituents are not more incompatible than in cow's milk and if there exists no serious commercial obstacle, goat's milk merits an extensive and thorough clinical trial in infant feeding.

The Ohio State Medical Journal, Columbus.
March 15.

38 *Phases of Civil Liability of Physicians and Surgeons and Remedies Therefore. E. B. Kinkead, Columbus.
39 *Need of Patent Medicine Legislation. T. Sollmann, Cleveland.
40 Removal of Foreign Bodies. J. M. Leslie, Chillicothe.
41 A Type of Appendiceal Abscess. C. A. Hamann, Cleveland.
42 Direct Inspection of the Esophagus and the Bronchial Tubes. F. L. Stillman, Columbus.
43 Medical Organization. B. H. Blair, Lebanon.
44 Prostatic Hypertrophy. T. G. Youmans, Columbus.

38. **Civil Liability of Physicians.**—Kinkead discusses many legal questions and in closing speaks briefly of "patent medicine." He says that it is the duty of medical men to cast aside some of that modesty which pervades the profession, come out in the open, and make war on "patent medicines." They owe it, he declares, to the people as well as to themselves. He thinks that to require a license of physicians before they can practice and at the same time to permit irresponsible persons to flood the state with worthless and injurious "patent medicines" is not consistent. The idea of surrounding a remedy with secrecy and exclusiveness is ridiculous. To permit citizens to take medicines on the printed directions of some unknown person, or of some person who is dead, without knowing whether it is what they need, is unfortunate, he says, and should not be permitted.

39. **Need of "Patent-Medicine" Legislation.**—Sollmann urges that the medical profession support any measure tending to the improvement, regulation and enforcement of the poison laws. However, great caution is necessary to keep out all sort of restrictions and omissions which would greatly lessen the effectiveness of these laws. The only practical remedy is complete publicity as to all the active ingredients of a medicine. That takes the moral responsibility from the shoulders of the manufacturer and places it on the consumer, who will be the chief sufferer if he disregards the warning. Sollmann points out that the passage of a formula law would make the druggist a morally responsible agent in the "patent-medicine" traffic, a result which Sollmann considers is desirable.

Medical Fortnightly, St. Louis.
March 10.

45 Adenoids. H. Stolte, Milwaukee.
46 *Use and Abuse of the Rest Treatment. F. P. Norbury, Jacksonville, Ill.
47 Acute Catarrhal Dysentery with a Report of Forty-six Cases. R. B. Chamlee, N. Birmingham.
48 Early Diagnosis of Tuberculosis. C. R. Russell, Keosauqua, Iowa.
49 Pain. J. T. Reddick, Paducah, Ky.
50 *Stomach Drainage in Long-Continued Indigestion. J. R. Maxwell, Keokuk, Iowa.

March 26.

51 *Use of Simple Hydrotherapeutic Means in the Treatment of Chronic Nephritis. A. C. Croftan, Chicago.
52 Heredity; Its Influence on Diseases of Children. F. M. Fuller, Keokuk.
53 Public Health. D. C. Brockman, Ottumwa.
54 Diagnosis and Treatment of Diseases of the Right Upper Abdominal Cavity. B. M. Ricketts, Cincinnati.

46. **Rest Treatment.**—The use of this method in the treatment of over 400 patients has fully convinced Norbury of its value. He urges, however, that to be successful its technic must be carried out just as carefully as is the technic of the surgeon when he operates. Each factor of the treatment must be considered and none left out, for it is the treatment as a whole which accomplishes results. These factors are isolation, rest, massage, electricity, diet, an educated, tactful nurse, a hopeful, healthful, optimistic physician and a suitable, wholesome, restful environment.

50. **Stomach Drainage in Chronic Dyspepsia.**—Maxwell cites three cases as proof that certain cases of long continued dyspepsia are not amenable to internal medicine, but can be cured by gastroenterostomy, the choice of the operation being left to the physician in charge.

51. **Hydrotherapy in Chronic Nephritis.**—Croftan attempts to show that such simple measures as hot bathing, properly administered, and the application of heat or cold to various portions of the body, can accomplish much in the treatment of the nervous, metabolic, gastroenteric and cardiovascular manifestations of nephritis. A judicious selection of the diet, especially with the end in view of maintaining adequate nutrition, is an indispensable adjuvant to treatment, for otherwise the organism can not maintain those reactive and recuperative powers that alone can bring about an amelioration of the disease, and, as far as that may be possible, a restitution to normal. Drugs, on the other hand, in Croftan's opinion, should be given very sparingly in chronic nephritis. They should always be reserved as an emergency measure and hydrotherapeutic means should replace them whenever possible.

Medical Examiner and Practitioner, New York.
March.

55 *Significance of Albumin and Casts When Found in the Urine of Apparently Healthy Applicants for Life Insurance. E. W. Dwight, Boston.
56 Significance of the Commoner Microscopic Findings in Urinary Sediments. L. N. Boston, Philadelphia.
57 Albuminuria. P. F. Barbour, Louisville.

55. **Significance of Albumin and Casts in Healthy Individuals.**—Dwight believes that albumin in minute traces is not only frequently found in normal urine, but is a normal constituent of the urine. After severe exercise or mental strain, and under certain other conditions, it is constantly found in traces in

individuals who give every other positive evidence of being in good health. In 600 cases of so-called renal albuminuria, hyaline and finely granular casts were detected in 93.8 per cent. Dwight thinks that as we know there must be albumin to some extent in all cases which present renal casts, so we are justified in the assumption that in all cases in which the albumin is of renal origin, casts might be found if the search for them is prolonged and sufficiently accurate. He takes the position that the finding of a true renal hyaline cast indicates that the albumin in the urine, or at least a part of it, is of renal origin. A decision should not be based on the finding of albumin and casts in the urine.

Journal of the South Carolina Medical Association, Charleston.
March.

58 Modern Mastoid Operation. E. W. Carpenter, Greenville.
59 A Retrospect of Fifty Years' Progress in Medicine. M. J. D. Dantzler, Elloree.
60 Contracted Pelvis Relieved by Cesarean Section. C. B. Earle, Greenville.
61 *Veratrum Viride. L. B. Bates, St. Matthews.
62 Tuberculous Peritonitis. H. L. Wilson, Jordan.

61. **Veratrum Viride.**—Bates records his experiences with this drug, which he regards as the only remedy for continuous abnormal vascular tension. He has found it very satisfactory in the first stage of pneumonia, influenza, and bronchitis, in combination with morphin and sweet spirits of niter. In a very aggravated case of traumatic chorea from granular erosion of the cervix uteri which had resisted the usual routine remedies, fifteen drops of veratrum, at intervals of fifteen minutes, until three doses were given, afforded prompt relief. In the toxemia of eclampsia its use also was attended by success. After giving a good mercurial purge Bates injects from 25 to 30 drops of Norwood's tincture at intervals of thirty minutes until he secures complete muscular relaxation, when the convulsions generally cease in all cases unless there is cerebral traumatism. Shortly after the relaxation nausea and vomiting occur. He allows this to continue until he thinks the full physiologic effect of the veratrum has been exerted. Then he injects from ¼ to ½ grain of morphin to allay the vomiting.

The Journal of Infectious Diseases, Chicago.
March 2.

63 Bacteriology of Whooping-Cough. D. J. Davis, Chicago.
64 *Studies on Human Parasites in North America. 1. Filaria Loa. H. B. Ward, Lincoln, Neb.
65 *Disseminated Blastomycosis. P. Bassoe, Chicago.
66 Rôle of Phagocytosis in the Anthracidal Action of Dog Blood. L. Hektoen, Chicago.
67 Anthracidal Substance in the Serum of White Rats. J. M. Horton, Chicago.
68 Adjuvant Action of Serum, Egg Albumin, and Broth on Tetanus Intoxication. H. T. Ricketts and E. J. Kirk, Chicago.
69 Further Studies on Virulent Pseudodiphtheria Bacilli. A. Hamilton, and J. M. Horton, Chicago.
70 Identity of Fusiform Bacilli and Spirilla. R. Tunnicliff, Chicago.
71 Further Studies on Streptococcus Infections. G. F. Ruediger, Chicago.
72 Etiology of Pemphigus Contagiosus in the Tropics. M. T. Clegg and W. B. Wherry, Manila, P. I.

64. **Filaria Loa.**—In this paper, to which is appended a very full and instructive bibliography, arranged alphabetically, Ward reviews all the cases of *Filaria loa* on record, adds two new cases, and describes very fully the morphology and pathology of this organism.

65. **Disseminated Blastomycosis.**—Bassoe reports a case of blastomycosis involving the lungs, lumbar vertebræ and subcutaneous tissues with multiple abscesses and fistulas and extensive amyloid degeneration. A full summary of the results of the gross and microscopic examination made after the death of the patient is given.

Annals of Surgery, Philadelphia.
March.

73 Frontal and Ethmoid Sinus Empyema. H. P. Moseley, New York.
74 Anatomy of a Case of Cystic Adenoma of the Thyroid. W. Keiller, Galveston, Texas.
75 *Results of the Surgical Treatment of Exophthalmic Goiter. B. F. Curtis, New York.
76 A Toy Bicycle in the Esophagus, Removal by Esophagotomy. H. M. Rigby, London.
77 *Overlapping the Aponeuroses in the Closure of Wounds of the Abdominal Wall. C. P. Noble, Philadelphia.
78 Foreign-body Pseudo-Tuberculosis in the Peritoneum. C. M. Cooper, San Francisco.
79 Solid Tumors of the Mesentery, with report of case. J. Vance, El Paso, Texas.
80 *Chylous Cysts of the Mesentery. M. F. Porter, Ft. Wayne.
81 Perforating Duodenal Ulcer. J. M. Elder, Montreal.
82 Practical Points in the Surgery of the Large Bowel, Exclusive of the Rectum. C. B. Nancrede, Ann Arbor.
83 *Method of Permanent Drainage of Both Kidneys Through the Loin in Connection with Bilateral Nephrostomy. F. S. Watson, Boston.
84 *Contribution to the Surgery of the Kidney. G. Barling, Birmingham.
85 *New Method of Excision of the Knee Without Opening the Joint. C. P. Flint, New York.
86 Effect on Glandular Tissue of Exposure to the X-Rays. W. J. Taylor, Philadelphia.

75. **Surgical Treatment of Exophthalmic Goiter.**—In addition to the advice to divide the operation by performing preliminary ligation of the arteries and to use local anesthesia, Curtis adds that it is advantageous, if not absolutely necessary, to have the preliminary treatment by rest in bed, ice bag to the heart, bromids, etc., carried out at the hospital where the operation is to be done, in order that the patient may learn to know and trust the surgeon, to like the nurses, and to become familiar with her surroundings. This adds greatly to the efficiency of the control of the patient under local anesthesia. Of 14 patients operated on, 4 died, all from acute thyroidism. Of the 10 patients who recovered from the operation, one improved, but has not been seen since. One was improved for two years, relapsed, later had one artery tied on the other side with improvement, and again relapsed. Eight patients are said to be practically cured, having been followed for six months (two cases), eighteen months, two years, five years, seven years, eight years and twelve years, respectively. Two of the cases were slight, but the rest were serious, and some patients were in a dangerous condition. The four patients who died were all advanced cases. These results are encouraging, and partial thyroidectomy has apparently yielded better results than sympathectomy. In one of his cases the latter method has effected a practical cure after a relapse following thyroidectomy. On the other hand, a relapse, with fresh enlargement of the thyroid, occurred in one case after sympathectomy, and, perhaps, a thyroidectomy would have brought about a cure here had it been possible to get the patient's consent. A temporary improvement was obtained in one of the relapsed cases by ligation of one artery on the other side, the improvement lasting two years or more.

77. **Overlapping the Aponeurosis in Closure of Abdominal Wounds.**—Noble describes his method, which was first published in 1897, and directs attention to the fact that during the nine years in which the method has been in use but a single patient has presented herself with a postoperative hernia.

80. **Chylous Cysts of Mesentery.**—The basis of Porter's paper consists of a study of the literature on the subject, including the reports of 19 cases which he has been able to collect, together with one case which occurred in his own practice. A diagnosis of appendicitis had been made. On opening the abdomen through the right rectus muscle a group of chylous cysts was found together with a volvulus involving that portion of the ileum attached to the mesentery in which the cysts were found. The bowel and mesentery containing the cysts were excised and an end-to-end anastomosis was made with the aid of a Murphy button. The patient died on the morning of the seventh day. A postmortem examination showed leakage at the mesentery attachment at the point of anastomosis.

83. **Permanent Drainage of Kidneys.**—The following article compose the apparatus designed by Watson for draining the kidneys: 1. Two red-rubber drainage catheters. 2. Two bits of rubber drainage tube, each two and a half inches long (more or less, according to the thickness of the patient's back), and of a size to fit tightly on the catheters and in the horizontal opening of the shield through which they are passed. 3. Two hard rubber shields about three inches in length, two inches wide, and curved to fit the back. There are three openings in each of the shields, two perpendicular and one horizontal; the latter should be a little narrower than the rubber tubing in order that it may compress the tubing firmly enough to prevent it, and the catheter which passes through it, from slipping to and fro. The former are long enough to admit tapes an inch wide. 4. Two pieces of strong

tape or elastic webbing. One end of this tape is attached to the outer of the two perpendicular openings in the plate. The tape should be long enough to pass around the body and is secured in the opening at the further end of the shield by a safety-pin, or such other device as may be preferred. Elastic bands have the advantage, as compared with tapes, of adapting themselves to the movements of the body and thus keeping the shield constantly apposed to the back. 5. A waistband long enough to go around the body and four inches wide. This band should be of stout material; its front ends are brought together by a couple of straps and buckles; on the lower border of the back of the waistband are attached four stout hooks, and there are two holes to allow the catheters to be led through the band. 6. Two flasks, 5 inches long by 4 inches high by 1½ inches wide, curved to fit the gluteal region; each having a nozzle projecting one inch above the middle of its top and just large enough to admit the ends of the catheters, and provided with a ring firmly soldered near either end of the inner side of the tops of the flasks. The flasks may be made of hard rubber, aluminum or any other suitable material having a surface that will not absorb urine. The *modus operandi* for employing the apparatus is given in detail, and for this part of the paper the reader is referred to the original article.

84. **Surgery of the Kidney.**—Barling reports six cases of disease of the kidney requiring nephrectomy. The six patients are alive and well. The conditions requiring the removal of the kidney were hypernephroma, pylonephritis and ureteritis, intermittent hydronephrosis, with extreme mobility of the kidney were hypernephroma, pyelonephritis and ureteritis, pyonephrosis simulating hepatic tumor, and pyonephrosis with large perinephritic suppuration due to renal calculus. The ages of the patients were 50, 26, 35, 25, 35 and 58 respectively. The first patient was operated on March 1, 1905, and the last Oct. 7, 1905.

85. **New Method of Excision of Knee Joints.**—Flint describes a method of excision of the knee joint which he thinks combines all the advantages of other methods without possessing any of their disadvantages. The skin incision should be rectangular, the two vertical cuts being well back at the sides of the leg, extending from a little above the level of the upper limit to the subcrural bursa to one inch below the joint line. These two vertical incisions are connected across the front of the tibia by a transverse incision. This rectangular skin flap with the subcutaneous tissue is reflected upward. The next incision is curved, the concavity upward. It starts in the vastus internus a little above the upper limit of the subcrural bursa and is carried down and outward in the direction of the muscle fibers to the tendon of the quadriceps extensor one-half inch above the patella, and from here upward and outward in the direction of the fibers of the vastus externus to a point corresponding to the beginning on the inner side. The muscle with the tendon is completely divided and turned upward, thus exposing to view the subcrural bursa. Two small incisions are made on either side of the femur, starting on each side of the patella in the incision just described, and carried downward and backward to the joint line. The one on the inner side divides the tendinous expansion of the quadriceps, the one on the outer side the tendinous expansion and part of the ilio-tibial band. After completing these incisions the subcrural bursa is separated from the femur with the knife and turned down, tilting the patella when not adherent.

The last incision in front is carried transversely across the front of the tibia down to the bone just below the joint line. On the inner side the sartorius and gracilis are pushed back; on the outer side of the biceps and peroneal nerve. A flat retractor, about one inch wide, is introduced on the inner side behind the head of the tibia close to the joint line. It is first introduced vertically between the gracilis and sartorius on one side and the tibia on the other. These muscles are pried off and the retractor is brought to a horizontal plane, the apex passing behind the tibia. This retractor is now pushed outward, always close to the bone, until it emerges at the outer side. All soft parts are thus held back.

The next step is to saw through the tibia as close to the joint as circumstances seem to warrant, the leg being still flat on the table; the retractor being in place protects the soft parts. The saw-cut through the head of the tibia is used as a joint. The femur is flexed on the body, the leg on the femur, and with a large knife the soft parts are quickly separated from the posterior structures of the joint. By a little downward traction on the leg, combined with the pull of its own weight, injury to the vessels is easily avoided. As soon as the posterior region of the condyles is exposed the femur is sawn through from behind forward and slightly downward at a level sufficient to clear the cartilage behind. This saw-cut is carried forward until it reaches the margin of the cartilage on the anterior surface of the femur, and the saw is then withdrawn. The direction of this cut should be downward and forward, so as to lose as little as possible of the femur and to obtain the desired slightly flexed position of the bones subsequently. After withdrawing the saw from the femur the leg is once more placed in a horizontal position. The saw is introduced behind the subcrural bursa at the upper margin of the articular cartilage on the front of the femur and a cut made which will meet the anterior limit of the horizontal saw-cut made from behind. This last cut is almost vertical, in the coronal plane, and allows the articular portion of the femur which extends upward in front to be removed with the joint. This is the last step of the incision proper, for it is now possible to lift out the joint with the patella and subcrural bursa, the articular surfaces of femur and tibia, all complete without having opened the joint. On removal of the tourniquet the bleeding points can be quickly clamped and tied, thereby reducing hemorrhage to a minimum. The subsequent steps of the operation differ in no way from those hitherto customary.

Surgery, Gynecology and Obstetrics, Chicago.
March.

87 The Free Interval in Meningeal Hemorrhage. F. G. Connell, Salida, Colo.
88 Obstetrical Dilatation of the Cervix. Dührssen, Berlin.
89 *Uniterminal and Biterminal Venous Transplantations. A. Carrel, and C. C. Guthrie, Chicago.
90 Preoperative Thrombi in the Region of the Field of Operation as a Cause of Postoperative Complication and Death. A. W. Abbott, Minneapolis.
91 Carcinoma of the Descending Colon. W. W. Grant, Denver.
92 Eetopic Decidua Formation. F. J. Taussig, St. Louis.
93 *Extensive Separation of the Periosteum in Displaced Bone Fragments. C. Beck, New York.
94 Case of Gluteal Cavernous Angioma. J. E. Summers, Jr., Omaha.
95 *New Method of Lateral Anastomosis. A. Werelius, Chicago.
96 *Technic of Operation for Empyema Used in Van Hook's Clinic. H. M. Richter, Chicago.
97 Technic of Abdominal Hysterectomy for Fibroids of the Uterus. F. H. Martin, Chicago.

89. **Venous Transplantations.**—As a result of a series of experiments performed on dogs, Carrel and Guthrie found that uniterminal and biterminal transplantations of veins on arteries produce, from a functional point of view, the transformation of veins into arteries. These arteriovenous anastomoses adequately transmit the blood indefinitely. After seven months the circulation through such an anastomosis is apparently as active as on the day of the operation.

93. **Separation of Periosteum.**—Beck calls attention to periosteal bands which often may be seen, if looked for with the radiograph, extending from a bone fragment after a fracture. These periosteal bands are likely to be the cause of much trouble, so that the process of healing may become in itself a disease. He advises the removal of all miniature fragments and of such portions of periosteum as protrude beyond the point of fracture.

95. **New Method of Lateral Anastomosis.**—This method is described in full in THE JOURNAL, Oct. 22, 1904, page 1230.

96. **Operation for Empyema.**—For the operation described by Richter local anesthesia is sufficient, preferably by the method of Schleich. The operation consists of a rib resection with the formation of a large opening for drainage of the pleural cavity. The device employed for this purpose consists of a Bunsen pump, a Wolff bottle to take up the discharge and to which a mercury manometer is attached to measure the degree of tension and to act as a safety valve against too strong tension, and a drainage tube passed through a sheet of rubber. The method is illustrated and described in detail.

Journal of the Minnesota Medical Association and the Northwestern Lancet, Minneapolis.

March 15.

98 Diaphragmatic Hernia. W. A. Dennis, St. Paul.
99 Accurate Determination of Errors of Refraction Without Cycloplegia, by Means of Astigmatic Charts. C. N. Spratt, Minneapolis.
100 Extrauterine Pregnancy. J. W. Andrews, Mankato.
101 Intestinal Perforation in Typhoid Fever. W. Courtney, Brainerd.
102 Case of Pseudo-Pterygium and Symblepharon Relieved by the Use of Thiersch Grafts. W. R. Murray, Minneapolis.

Cleveland Medical Journal.

March.

103 Status Lymphaticus, with Death Under Ether Anesthesia. A. F. Furrer, Cleveland.
104 Heart Disease as a Complication of Pregnancy and Labor. F. S. Clark, Cleveland.
105 Splenomegalic Type of Hypertrophic Cirrhosis. N. M. Jones, Cleveland.

Pacific Medical Journal, San Francisco.

March.

106 Random Notes from an Alkaloidal Practice. R. J. Smith, Smithfield, Utah.
107 Dietary and Hygienic Treatment of Bright's Disease, Diabetes Mellitus and Pulmonary Consumption. B. F. Feich, Chicago.
108 Directions for Collecting Information and Objects Illustrating the History of Medicine. J. M. Flint, Washington, D. C.
109 An Inquiry in Regard to Mental Phenomena Connected with Anesthesia. J. Jastrow, Milwaukee.

Buffalo Medical Journal.

March.

110 Gastrojejunostomy. A. B. Miller, Syracuse, N. Y.
111 Infantile Indigestion. A. A. Young, Newark, N. Y.
112 Non-surgical Treatment of the Prostate in Emergency Cases. J. H. Dowd, Buffalo.
113 Foreign Body in the Lung. F. E. Fronczak, Buffalo.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

March 24.

1 The Cystoscope. D. Newman.
2 *Anesthetics and Renal Activity. W. H. Thompson.
3 *Treatment of Cicatricial Strictures of the Urethra with the Electrolytic Needle. S. B. Selhorst.
4 Intracranial Hemorrhage in the Newborn. J. C. Turnbull.
5 *Ascaris Lumbricoides and Appendicitis. F. E. Anley.

2. **Anesthetics and Renal Activity.**—In this, the second part of his report, Thompson considers ether, the A. C. E. mixture, and the ether-chloroform mixture. During ether narcosis the volume of urine secreted was diminished in the majority of his experiments. The depressing effect of ether, he states, is more marked than that of chlorform, and complete arrest of secretion occurs more readily. The after-effect is also similar to that of chloroform, but, as a rule, it is less marked. The maximum outflow of urine occurs about three hours after removal of the anesthetic. The effect of ether on the output of nitrogen corresponds more closely with its influence on the outflow of urine than is the case with chloroform. The urine when diminished in volume is, as a rule, more concentrated (contains more nitrogen). The converse was the case in the chloroform experiments. In ether narcosis, when the curves of urine outflow, kidney volume and blood pressure are compared there is found to be a closer correspondence than is the case with chloroform. The escape of leucocytes into the urine is also more marked with ether than with chloroform, probably indicating a higher degree of stasis in the glomerular capillaries. The excretion of chlorids is increased, but it is less and of shorter duration than in the case of chloroform.

During full narcosis with the A. C. E. mixture the outflow of urine is diminished, but to a less degree than with either chloroform or ether; the excretion of nitrogen is less depressed than the volume of urine; the effect on the concentration of urine alternated between those of chloroform and ether; the chlorids were increased to a less degree than with chloroform, but to a greater degree than with ether. The full influence of the ether-chloroform mixture produces a diminution of urine less than that of ether, but more than that of chloroform. The excretion of nitrogen is less influenced than that of urine. The urine of the anesthetic period was more concentrated than normal, and the chlorids were increased, but to a less degree than with any of the previous anesthetics. The effect of the mixture closely resembled that of ether.

3. **Electrolysis in Treatment of Cicatricial Strictures.**—After the dilatation of the stricture and a thorough and minute irrigation of the urethra with a solution of a mercuric preparation, Selhorst inserts an Oberlaender's urethroscopic tube, passing along the whole length of the stricture. In examining the urethra the tube is withdrawn slowly until the surface of the constriction is shown in the opening. The needle, ending in a strong platinum point from 1.5 cm. to 2 cm. in length, isolated almost quite close to its point, is forced to a depth of from 0.5 cm. to 1 cm. into the fibrous tissue according to the dimension, thickness, and hardness of the tissue. The needle is the negative pole of a galvanic battery, the positive pole of which, a large moistened, wetted disc, is placed on the thigh or on the abdomen. The electric current of from 4 to 6 milliamperes is turned on for three minutes. Before withdrawing the needle Selhorst interrupts the current, and drives the needle into another part. This operation may be repeated four or five times during a sitting, and, if executed by an expert hand, is said not to be very painful. During the whole period of treatment a bougie is introduced once a week, followed by an irrigation with a nitrate of silver solution to promote reabsorption, and to maintain the passage of the urethra at the size required. The number of the sittings depends on the extent of the stricture as well as on its thickness and hardness.

5. **Ascaris Lumbricoides and Appendicitis.**—Anley reports two cases, the history of which was typical of a catarrhal appendicitis. Both patients passed a round worm and from that moment began to improve, making an uninterrupted recovery.

The Lancet, London.

March 24.

6 Distribution and Recovery of Peripheral Nerves Studied from Instances of Division in Man. J. Sherren.
7 *Biliary Calculi. E. S. Bishop.
8 *Post-Traumatic Hemorrhage from the Superior Longitudinal Sinus Without Fracture of the Skull. E. F. Buzzard and J. Cunning.
9 Fatal Case of Septic Thrombosis of the Lateral Sinus, Secondary to Chronic Otitis Media Purulenta. J. S. Barr.
10 Two Cases of Arrested Development of the Rectum. H. S. Forsdike.
11 *Therapeutic Effects of Mercury in a Case of Tuberculous Meningitis. W. H. W. Brown.
12 *Treatment of Internal Hemorrhage by the Use of Drugs. W. E. Dixon.

7. **Biliary Calculi.**—Bishop cites a number of cases which illustrate the difficulties of diagnosis encountered in actual practice, and the means which at the present time are most useful in differentiation.

8. **Hemorrhage from Superior Longitudinal Sinus without Fracture.**—Buzzard and Cunning attribute the hemorrhage in this case to the tearing away of a tributary vein, from its junction with the sinus, at the time of the accident. The search of the literature failed to reveal a similar case.

11. **Mercury in Tuberculous Meningitis.**—Brown records the beneficent effect of inunctions of mercurial ointment, and mercury, combined with the iodin and bromid of potassium, by the mouth in an unusually severe case of tuberculous meningitis. He is convinced that there are occasional cases of apparently genuine tuberculous meningitis that are cured by mercury, especially if the inunction is commenced early, if it is pushed, and if the patient's strength is maintained.

12. **Treatment of Internal Hemorrhage.**—Dixon endeavors to show that the tannins, adrenalin, digitalis and its allies, ergot, veratrine, barium and lead are all worse than useless in the treatment of nosebleed or hemorrhage from the brain or the liver. Calcium, in his opinion, is the drug for that purpose, administered preferably in the form of the chlorid. In urgent cases the drug should be given subcutaneously. For this purpose the calcium chlorid should be neutral and injected deeply, in one or two grain doses, into subcutaneous tissue, so that the local irritant action of the drug may be avoided.

Annales de l'Institut Pasteur, Paris.

Last indexed, page 917.

13 (XX, No. 2.) Les Pasteurella. Chamberland and Jouan.
14 *Etudes sur la fièvre jaune (yellow fever). E. Marchoux and P. L. Simond.
15 De l'anti-endotoxine typhique. Besredka.
16 La culture des microbes anaérobies appliquée à l'analyse des eaux. A. Guillemard.

14. **The French Yellow Fever Commission.**—This article is the third published by the French yellow-fever commission to Brazil. It describes experimental research in the biology of the *Stegomyia fasciata*. It was found that the female mosquito is capable of biting man from the first days of its adult existence, but that it very soon ceases to bite during the day, especially after it lays its first batch of eggs. The result is that under normal conditions the transmission of yellow fever does not occur during the day, that is, between 7 a. m. and 5 p. m. The ingestion of living blood is indispensable for the development of the eggs. The blood loses this property of favoring the development of the eggs if it stands even a short time. The stegomyia is capable of laying several batches of eggs, sometimes as many as seven, after a single coupling, on condition that blood be ingested anew after each laying. As a rule the stegomyia lays two or three times. It is this faculty of surviving to lay several batches of eggs which distinguishes the stegomyia and permits it to be the vehicle for the transmission of yellow fever. In children yellow fever runs a very mild course. The mortality is nearly zero during the first year of life, and is very low up to adult age. Abortive or "frustes" cases are noted at all ages, but are the rule in children. They confer immunity, however, although the durability and strength of this immunity vary with individuals. It may be re-enforced by recurrences. Recurrence of yellow-fever probably happens oftener than is generally recognized. It may escape observation on account of the extreme mildness of the symptoms, although a recurrence is liable sometimes to be a serious affair. Relapses are rare. When they occur they are generally very severe.

Presse Médicale, Paris.

17 (XIV, No. 11.) *L'hépatalgie des asthmatiques. A. Gilbert and M. Villaret.
18 Innervation de la vésicule biliaire (gall bladder). J. P. Langlois.
19 Comment on peut administrer la valériane. A. Martinet.
20 (No. 12.) Des colloïdes. Définition. Importance de leur étude pour la biologie et la thérapeutique. H. Iscovesco.
21 Le bacille fluorescent liquéfiant dans diverse affections de l'appareil broncho-pulmonaire. Ferry and A. Mandoul.
22 *Des bonnes ampoules en radiothérapie (good tubes). H. Noiré.
23 (No. 13.) L'albumine dans l'alimentation des tuberculeux. H. Labbé and G. Vitry.
24 L'intoxication saturnine et le traitement de la colique de plomb. Deléarde and E. Dubois.
25 *La méthode de Bier et le massage dans les contusions et les entorses (sprains). R. de Gaulejac.
26 (No. 14.) *Les prétendus symptomes de l'hémiplégie hystérique. J. Ingegnieros (Buenos Ayres).
27 *Les injections profondes dans le traitement de la névralgie faciale rebelle. F. Lévy and A. Baudouin.
28 (No. 15.) De la rétroversion utérine. Le Dentu.
29 *Danger de l'ingestion de bacilles tuberculeux tués par la chaleur (killed by heat). A. Calmette and M. Breton.

17. **Pain in the Liver in Asthmatics.**—Gilbert and Villaret call attention to the pain distinctly localized in the liver region which may be observed in some cases of asthma, the exacerbations of the pain corresponding with the attacks of asthma. This hepatalgia may occur at any stage of asthma, although less pronounced in its early phases. It may become so severe as seriously to incommode the patient. They relate the particulars of three cases of this kind; the patients had all reached the stage of emphysema. The pain in the liver region had been long observed; it was increased by pressure, but was not accompanied by any appreciable enlargement of the organ. They attribute the condition to congestion of the liver from impending asystolia. The cholemic condition of their patients, the persistence of the pain between the attacks of asthma, its resistance to all the usual therapeutic measures, and the prompt relief after blood-letting, are a train of symptoms revealing passive congestion on the part of the parenchyma of the liver. When the congestion has continued until there is destruction of part of the liver tissue and of the nerve terminals, the organ becomes less sensitive. In 2 cases the patients were relieved of the hepatalgia by absolute repose, a milk diet and venesection or wet-cupping. In one case the hepatalgia had been noted for fifteen years.

22. **Good Tubes for Radiotherapy.**—Noiré describes the requisites for a good tube in radiotherapy. He remarks in conclusion that in Sabouraud's service, where more than six thousand sittings have been given the best results were invariably attained with an anticathode of platinum or some other metal, but always re-enforced, the glass very thin, and the tube not more than 8 cm. in diameter.

25. **Passive Congestion and Massage for Sprains and Contusions.**—De Gaulejac reports remarkably rapid healing of sprains treated with Bier's technic for artificial hyperemia. It relieved the pain much better than other measures and the after-results were unusually fine. Constriction of the limb induces dilatation of the vessels and a hyperphagocytosis which produces excellent conditions for massage to complete the cure. Constriction is applied for only from fifty to sixty minutes on the first day as it is liable to increase the pain at first. The sittings are prolonged to an hour or two on the following days. When the tourniquet is removed the injured member is massaged for ten or fifteen minutes and a flannel band wrapped lightly around it. When the lesion is on the trunk Gaulejac applies cupping around the lesion. Immobilization is imperative in all cases. He commends this combination of passive congestion and massage as a great advance in the treatment of sprains and of slight or moderate contusions.

26. **Signs of Hysteric Hemiplegia.**—Ingegnieros reports a case of hemiplegia, which presented all the signs of an organic affection, and yet the symptoms altered under hypnotic suggestion and finally yielded entirely to simple psychotherapy.

27. **Deep Injections of Alcohol in Treatment of Facial Neuralgia.**—Levy and Baudouin describe their technic for injecting the nerves at their emerging points and relate that this procedure is proving a perfectly harmless and effectual means of treating rebellious facial neuralgia. (See abstract 34, page 390.) After considerable experimental and clinical research they have adopted the following dosage: They inject 1 or 2 c.c. of alcohol, first at 70, then at 80, and then at 90 per cent., with or without cocain. They then add four drops of chloroform to each c.c. and repeat the procedure. They use a special needle which has a sharp point, but also has a blunt guide inside which can be adjusted to project beyond the sharp tip of the needle and to transform it into a blunt tip. This can be pushed into the tissues without danger of injury. They describe the technic for inserting the needle so as to reach the trunk of the inferior maxillary as it emerges from the foramen ovale, also the superior maxillary at its emerging point and the ophthalmic nerve. From six to eight injections are generally needed. They are given at intervals of three or four days. Experience has demonstrated that it is necessary to inject at least two of the branches of the trigeminal. These deep injections of alcohol have been used by these authors in six cases of extremely severe trigeminal neuralgia with almost continuous pains, accompanied by muscular twitchings, and of several years' duration. Medical treatment had long ceased to relieve and two operations on the peripheral nerves in one case had been unsuccessful. None of these patients has any further neuralgia. Four others still under treatment are very much improved. None of the cases in which the neuralgia was mild or of recent development is included in this report. The simplicity and harmlessness of the method commend it for general adoption, they say, even if recurrence should be observed later in some cases. [Allaeys of Antwerp has been equally successful with 3 cases of old, rebellious neuralgia, while Ostwalt, Schlösser and others now number their cures by the hundreds.—ED.]

29. **Danger from Ingestion of Tubercle Bacilli Killed by Heat.**—Calmette and Breton announce that guinea-pigs after experimental tuberculosis infection, either by the mouth or by intraperitoneal injection, succumbed much sooner than the controls under repeated ingestion of small amounts of tubercle bacilli killed by boiling. The repeated ingestion of tubercle

bacilli killed by boiling caused disturbances even in sound guinea-pigs, the symptoms observed resembling those induced by several small doses of tuberculin at intervals of a few days in non-tuberculous animals. Experiments are now under way to determine whether these same conclusions apply to larger animals, cattle and goats. Enough has already been learned, however, to warrant the statement that tuberculous products, even when sterilized by heat, are liable to be dangerous for persons already infected with tuberculosis, and may not be entirely harmless even for healthy persons. Milk from tuberculous cows, therefore, should not be used, even after thorough boiling, as this does not render it entirely harmless. Its use should be absolutely forbidden for children and for tuberculous adults. In conclusion Calmette and Breton add that these new facts should impel the powers that be to exercise still stricter supervision over dairy farms and to insist on the systematic use of the tuberculin test. Calmette published last October an announcement that experimental ingestion of bovine tubercle bacilli, even in small doses, repeated two or three times, entailed the tuberculization of the lungs, while the mesenteric glands were left intact. On the other hand, tuberculosis of the mesenteric glands invariably followed when kids were suckled by goats with tuberculous mammitis. The lungs rarely showed tuberculous lesions in this case. Tuberculous infection also invariably resulted when guinea-pigs were given 1 or 2 c.c. of freshly dried bovine tubercle bacilli mixed with potatoes or carrots at a single meal. Young guinea-pigs, not more than ten or fifteen days old, died of the infection in about sixty-two days afterward. The mesenteric glands were the seat of advanced tuberculous lesions, and in most cases the peri-bronchial glands were also involved, but no tubercles were visible in the lungs. The adult guinea-pigs succumbed about twelve weeks after the single infecting meal (2 eg. of freshly dried bovine tubercle bacilli). When the infected animals were fed afterward with a few small doses of tubercle bacilli, killed by heat, the anatomic alterations found were identical with those observed in guinea-pigs treated with small, repeated doses of tuberculin, namely, discoloration and enlargement of the kidneys, with hypertrophy of the suprarenal capsules and liver and granular-fatty degeneration of the latter.

Semaine Médicale, Paris.

30 (XXVI, No. 10.) De la prétendue épidémicité de l'appendicite. L. Cheinisse.
31 Les "3 points pulsatiles de la radiale" dans l' artériosclérose. L. Minervini (Naples).

Münchener med. Wochenschrift, Munich.

32 (LIII, No. 4.) *Appendikostomie. Lanz (Amsterdam).
33 Zur Therapie der akuten Perityphlitis. Graser (Erlangen).
34 Zur Früh-Operation bei Epityphlitis. Gunkel.
35 *Die beim postoperativen Ileus wirksamen mechanischen Momente. Wilms.
36 *White Corpuscles in Blood.—Die farblosen Zellen des menschlichen Blutes. H. Schridde.
37 *Parasite of Cancer and Transplantable Malignant Tumors in Animals.—Ueber einen protozoen-ähnlichen Mikro-organismus in malignen Tumoren und durch diesen erzeugte transplantierbare Geschwulstformen beim Tiere. O. Schmidt (Cologne).
38 Ueber Volvulus der Flexura sigmoida bei Hirschsprungscher Krankheit. Delkeskamp.
39 *Zur Pathogenese des akuten Gelenkrheumatismus. A. Schlbach.
40 "Eine neue Methode zur Diagnostik und Therapie der Nasenerkrankungen" (of nasal affections). L. Rethi.
41 (No. 5.) Ueber Lokal-Anästhesie mit Novokain-Suprarenin. F. Liebl.
42 Intraperitoneale Ligament-Verkürzung nach Menge (shortening of ligaments). von Steinbüchel.
43 *Elimination of Uric Acid, etc., During Roentgen Treatment of Leukemia.—Ueber die Harnsäure- und Xanthin-Basen-Ausscheidung während der Behandlung 2 Leukämiker und 1 Falles von Pseudo Leukämie mit Roentgenstrahlen. F. Rosenberger (Leube's clinic, Würzburg).
44 Die Endotoxin-Lehre. A. Wolff.
45 Comparative Tests for Sugar in Urine—Quantitative Zuckerbestimmung im Harn (Riegler, Pavy und Polarisation). R. Levy.
46 "Ueberempfindlichkeit und beschleunigte Reaktion" (oversensibility and accelerated reaction). E. Löwenstein.
47 *Precipitin for Cow's Milk in Infant's Blood.—Kuhmilchpräzipitin im Blute eines 4½ Monate alten Atrophikers. E. Moro.
48 Typhus-Bazillus und Bacillus Faecalis alcaligenes. H. Conradi.
49 *Infant Mortality and Survival of the Fittest.—Säuglingsmortalität und Auslese. H. Koeppe.

32. **Appendicostomy.**—Lanz says that he has never lost a patient in his 710 cases of appendicectomy out of 1,286 cases of appendicitis, and has never had but one fecal fistula after the operation. He attributes his success in part to the fact that he operates in two sittings in gangrenous cases. He brings the base of the appendix out and sutures the peritoneum carefully, and also the soft parts around it. This part of the appendix is then resected, merely the stump still projecting from the center of the sutured incision, with a catgut ligature around the base of the stump. The whole is covered with collodion, changed every few days, and removed on the tenth day, after which the stump is cauterized daily with silver nitrate. The tip of the appendix in his first case thus treated was imbedded in an abscess, and nothing was done to free it on account of the friable condition of the appendix and the complex adhesions. Nine months later the patient, a man of 56, experienced slight pains in the scar and a pulling sensation, with slight nausea. The appendix was easily extirpated this time, with an extra-appendicular abscess the size of a bean. No bacteria were found in the obliterated appendix nor in the abscess. In some later cases this operation in two sittings has proved remarkably successful. At the second sitting the appendix, which had been immovably fastened at the first operation, could be removed without the least difficulty. In appendicitis he operates if possible during the first or second day, but after this only when compelled by vital necessity, and then limits intervention to opening the abscess and draining the peritoneum. When the inflammation has subsided and the patient has entirely recovered he removes the appendix.

35. **Postoperative Ileus.**—Wilms describes the mechanism by which the paralysis of even a short stretch of intestine is able to form a kind of valve, closing the passage.

36. **The Leucocytes.**—Schridde's conclusion from much research is that in the postembryonal life the lymphocytes and leucocytes are two absolutely distinct races of cells. Lymphocytes can be produced only by the lymphoblasts, while the myeloblasts produce only leucocytes. The place of origin of the latter is exclusively the bone marrow, and that of the lymphocytes the lymph follicles.

37. **Intermediate Host of Cancer.**—Schmidt believes that he has discovered in a certain fungus the intermediate host of the protozoan parasite which he considers responsible for malignant tumor growth. He has previously announced in the "Communications from His Cancer Research Laboratory" (published by Hager of Bonn), his technic for showing these parasites. The fact that he was unable to cultivate them on the ordinary culture media convinced him that an intermediate host was involved. It might be an insect or a plant. He has found on the *Mucor racemosus* cultivated from malignant tumors certain formations which have nothing to do with the spores, sporangia, mycelium or buds of the fungus, while they are apparently identical in every respect with the protozoan parasite of cancer. They are spontaneously motile and grow by endogenous spore formation. In the parasites as observed in cancer, the ameboid, vegetative forms are most predominant, while on the fungus the sexual forms prevail and the ameboid forms are rare. Specimens of *Mucor racemosus* taken from cancers always developed these characteristic forms, while none was ever found on specimens of the mucor from other sources. In experiments on 80 animals, 6 true tumors developed after inoculation with the mucor containing the suspicious formations, 5 of the tumors of unmistakably malignant character. In one of the animals, a mouse, multiple metastasis was observed. Ehrlich has recently reported that the mice which spontaneously develop malignant tumors are almost invariably females and old. In Schmidt's researches he made a point of inoculating only just matured animals, and the malignant tumors developed in four males and two females. Microscopically the tumors seemed to be identical with Jensen's mouse tumors. Their malignant character was confirmed by the microscope, by their transmissibility, by transplantation of cells to other individuals of the same species, and by the development of metastases. These and other experiences convinced him of the specific nature of his parasite, and he proceeded to study the local and general reac-

tion that follows injection of killed pure cultures of the parasite, hoping to utilize the specific reaction as a means of curing cancer in the clinic. He describes the results observed in five out of a larger number of cases thus treated at Czerny's clinic. The general and local reaction was unmistakable, while no reaction was observed in healthy persons. The objection that possibly the mucor itself might be responsible for the tumor formation and reaction he answers by calling attention to the fact that this mucor never grows at the temperature of the body of warm-blooded animals, although the spores may remain in it for months and not lose their germinating power.

39. **House Series of Cases of Acute Articular Rheumatism.**—Sehlbach states that he has had occasion to observe three cases of articular rheumatism occurring during February or April of three successive years in a two-story stone flat building. None of the three patients had ever suffered from tonsillitis, he says. The first case developed after the house had been built a year, and five years have now elapsed since the last case. The air seemed damp on entering the house during the first year or so after it was built.

43. **Elimination of Uric Acid, Etc., During Roentgen Treatment of Leukemia.**—Rosenberger summarizes his research in the statement that under Roentgen treatment the elimination of uric acid increases in leukemics. He was unable to detect any increase of this kind in other patients. If the proportion eliminated increases, the prognosis becomes less favorable, as the elimination diminishes as the patient shows other signs of recovery. The elimination of the xanthin bases increases during radiation and its after-effects.

47. **Precipitin for Cow's Milk in Infant's Blood.**—Moro and others were unable to find any traces of specific precipitins for cow's milk in the blood of infants with gastrointestinal troubles in their research a few years ago. They reasoned that if the injured lining of the intestines allowed the passage of albumin from the cow's milk into the blood, this fact would be revealed by the production of a precipitin, readily manifest in the biologic test. Their results were all negative, but resuming the research recently, Moro found intense precipitin action in the blood of an infant with general atrophy. The large amount of precipitin present indicated that albumin from the cow's milk must have been being absorbed for a long time. Albumin from cow's milk circulating in the blood can not be regarded as a harmless condition. Salge found that even 0.1 c.c. of cow serum, corresponding to 0.007 gm. cow albumin, caused the severest symptoms when injected subcutaneously into nurslings, in some instances inducing threatening collapse. Moro discusses the possibility of the atrophy being the result of the alien albumin in the blood.

49. **Infant Mortality and Survival of Fittest.**—Koeppe presents new statistics which confirm his previously published views that a high infant mortality does not indicate that the survivors are particularly well adapted for the struggle for existence. On the contrary, the same causes which induce a high infant mortality in the first year presumably still operate to induce high morbidity in the following years.

Nordiskt Medicinskt Arkiv, Stockholm.

Last indexed, page 842.

50 (XXXVIII, Surgery, No. 2.) *Die Ovariotomie in Finnland. A. R. Limnell (Helsingfors).
51 *3 Fälle von Rectal-Sarkom. E. Key.
52 Ueber Zangenentbindung bei hochstehendem Kopf (forceps extraction in breech presentation). N. Muus.
53 Rinne Test and Time of Perception of Tuning Fork.—Ueber Rinne's Versuch sowie über die Bestimmung der Perzeptionszeit von Stimmgabeln. N. R. Blegvad.
54 *Ueber die Otosklerose mit bes. Berücksichtigung auf path. Anatomie und Diagnose. J. Möller.

50. **Ovariotomy in Finland.**—This article opens with a reference to the "father of ovariotomy," Ephraim MacDowell, stating that the first ovariotomy in Finland was done in 1849, forty years after his pioneer work. Germany followed his lead in 1819, England in 1825, but France not until 1844. Out of the 424 ovariotomies performed at Helsingfors nine were done for recurrence of the lesion, requiring a second operation. Of the total number 385 patients were dismissed healthy, 2 only improved, 3 not benefited, and 34 had died, the majority cancer cases. Later information has been received from 303 patients after an interval of from a few months to twenty years. Among the 211 who were found healthy were 4 women who had been operated on for carcinoma, 35 for dermoid cystoma, 47 for pseudomucinous cystadenoma, 1 for adenocarcinoma, 3 for fibroma and 93 in which the character of the affection was not known.

Classifying the after-results according to the character of the affection for which the ovariotomy was performed, he found in 60 cases of pseudomucinous cystadenoma that 47 of the patients were entirely healthy, while 3 patients exhibited recurrence and one had nephritis a year afterward. In 20 cases of carcinoma or adenocarcinoma only 4 of the patients are free from recurrence after an interval of from one to four years. In 43 cases of dermoid cystoma, 35 patients are healthy (one month to 15 years); 6 have pains in the abdomen and general weakness, and 2 have died. The 3 patients with fibroma are all well; the 2 with endothelioma died not long after the operation, as also those with sarcoma.

51. **Sarcoma of Rectum.**—Key's first patient was a man in the fifties who had long suffered from hemorrhoids. A pedunculated tumor supposed to be a polyp was excised from the posterior wall of the rectum, and two years later another similar tumor was removed from the same site. It proved to be a melanoma, and a third recurrence required extirpation six months later. The patient succumbed to the affection in less than a year afterward. The case illustrates the peculiar malignancy of melanoma, and the importance of an early and radical operation. The second patient was a woman of 52, who had noticed slight discomfort and moisture at the anus for seven or eight weeks and finally felt a small tumor. There was no pain. The tumor resembled a hemorrhoidal varix, but examination showed ulceration and a little blackish secretion. A few lumps could also be felt a little higher up, and the inguinal glands were somewhat enlarged. The growths and glands were extirpated, and a recurrence took place five months later. The melanoma then recurred at various other points in four or five months. These tumors were also extirpated, but the patient began to lose strength a year after the first symptoms, and succumbed in the sixteenth month. The third tumor reported was a very vascular, round-celled sarcoma. There had been preceding hemorrhoidal troubles with considerable bleeding. A year before the operation the patient noticed that a plug about an inch long, the size of the little finger, protruded from the anus during defecation; this gradually increased in size, and there was pain and finally difficulty in urinating. The tumor was excised, but soon recurred, and the patient committed suicide. Key has been able to find only 60 cases of sarcoma of the rectum on record, omitting the dubious ones, and 38 of these were described as melanosarcoma. The youngest patient was 6 and the oldest 70 years of age. The ages of the patients with melanosarcoma ranged from 20 to 70. The average for 28 cases of melanosarcoma was 50.2 years. Males predominated. The symptoms are those of cancer in general. The feeling of a foreign body in the rectum is frequently a sign of a pedunculated tumor. In removing the growth mere excision is not enough; extensive resection is necessary.

54. **Otosclerosis.**—Möller's review of the literature can be summarized in the statement that otosclerosis is a special morbid entity with its own pathologic anatomic foundation, a characteristic new formation of bone in the interior of the labyrinth. It is a primary affection and does not depend on former affections of the ear. The characteristic syndrome includes progressive bilateral deafness, with an insidious course, occurring especially in young people in whose family similar cases already exist. The picture of the tympanic membrane is normal, or possibly showing redness shining through. There is also reduced bone conduction, restriction of lower and upper sound limits, and negative findings with the Gellé test. In treatment he warns against the air douche. Lucae's spring pressure catheter sometimes gives good results, but is liable to be painful. Vibration of the ear drum is a better measure, whether done with the Delstanche suction instrument or the Siegel, or merely by intermittent pressure on the tragus. Breitung's air pump is the most effectual. With the aid of

these the hearing can be improved in many cases, and in others can be kept from growing worse, while the subjective sounds are frequently cured. Operative measures do not offer much advantage, while they are inclined to be dangerous. Transient benefit has sometimes been obtained from administration of potassium iodid, quinin, sodium bromid, etc., but striking success need not be anticipated. Administration of phosphorus is more promising, and, he states, is certainly worth a trial, giving one or two tablespoonfuls a day of a 1 to 10,000 solution of phosphorus. Siebenmann has reported that the phosphorus arrested the progress of the affection in 50 per cent. of his cases. Much can be done in the way of prophylaxis. The affection shows a special tendency to run in families, and the younger members of such families should be guarded with special care. They should be kept from "catching cold," from exposure to sudden climatic changes, and from overexertion, both mental and physical. The diet and hygiene generally should be supervised, tobacco and alcohol avoided, and nervous, especially vasomotor disturbances, should be combated, while all nose and throat affections should be carefully treated. Members of these otosclerotic families, he adds, should be warned against matrimony. In 10 of the 36 cases a catarrhal affection of the eardrum was manifest, but it was so slight that it could not have been an important factor in the process. Only in one case was there a history of preceding suppuration in one ear.

Norsk Magazin f. Laegevidenskaben, Christiania.

55 (LXVII, No. 1.) *Til encefalit-sporgsmaalet. S. Laache.
56 Acute Yellow Atrophy of Liver in Boy of 6.—Akut gul leveratrofi af infektlös oprindelse (streptokokker). F. Harbitz.
57 Calomel som diureticum. P. F. Holst.
58 Chorea gravidarum et psychosis. Partus prematurus artificialis. Helbredelse. H. J. Vetlesen.
59 Et tilfaelde af akut myelit; bakteriologisk undersogelse af cerebrospinalvaedsken. V. Magnus.
60 Hernia diaphragmatica. E. H. Hansteen.
61 Rhinoplastik ofter en ny methode. H. Schilling.
62 (No. 2.) *Om pseudomeningitiske (og meningitiske) tilstand med udgang i helbredelse. (Recovery). S. Laache.
63 Epidemisk optraeden af akut poliomyelit. Discussion.
64 Tör-kur ved hjertesygdom ("dry cure" in heart disease). P. F. Holst.
65 Erfaringer om appendicitis. J. Roll.

55. **Encephalitis.**—Laache discusses the curability of encephalitis and describes 6 cases of the disease. One of his patients had suffered from a similar affection years before, with ten years of health before the fatal recurrence. Only one patient was a man; the symptoms of encephalitis in his case had been preceded by chronic hematuria from cystopyelitis. The process in the brain was in the right hemisphere and was very extensive, inducing numerous contractures of the muscles of the limbs and face and stupor suggesting chronic uremia. Tham has reported a somewhat similar case in which meningo-encephalitis caused a kind of sleeping sickness beside the convulsions, with normal intervals. One of Laache's patients presented symptoms suggesting tuberculous meningitis. The postmortem findings are shown in colored plates, the symmetrical hyperemia on each side of the longitudinal sinus being especially prominent, as also the thrombosis in the veins of this region. There was nothing in the history of the case of acute hemorrhagic, non-suppurative polioencephalitis to suggest a preceding infectious disease as responsible for the condition. The other patients were 5, 10 and 20 years old, respectively. There was nothing to indicate syphilis in any case.

62. **Recovery After Meningitic or Pseudomeningitic Conditions.**—Laache reports 5 cases in which he was told by the patients that at some previous time they had passed through an illness, the symptoms of which, as related, seemed to have been those of meningitis (not the epidemic variety). Recovery from meningitis is so rare that he investigated the cases and has kept the patients under supervision since. The first patient was a girl of 4, tuberculous and psychopathic, with a tendency to rachitis. The acute cerebral affection had a sudden onset, but the child slowly regained her health. The second patient was a woman of 21, who suffered from diffuse headache, with rigidity of the neck, vomiting and slow pulse after a sun bath. This was possibly a case of sunstroke. Rapid improvement soon followed. The patient now shows signs of consumption. The third patient was a lad of 13 whose brother had recently died of tuberculous meningitis. The patient was addicted to cigarette smoking. He suddenly exhibited headache, rather slow pulse, slight temperature, rigidity of the neck, and a transient exanthem. He rapidly improved under iodoform salve externally and potassium iodid internally. The fourth patient was a young woman who recovered under Laache's eye from a second attack of serous meningitis, after an interval of nearly three years. The symptoms began abruptly the second time without a prodrome. The condition gradually improved to complete recovery after several weeks. The fifth patient was a young clerk who had an affection of the face, possibly erysipelas, followed by great prostration, headache, bradycardia, double vision and facial paralysis. Complete recovery followed after a protracted convalescence. Pseudomeningitic symptoms may be induced by febrile and infectious diseases, especially in young children and in the aged. Pneumonia in children frequently affects the brain. Cephalalgia may follow mumps and be accompanied by bradycardia, sometimes very pronounced. Laache has witnessed several instances of this. Pseudomeningitic symptoms may likewise be induced by disturbances in the circulation through the brain or may even be of merely nervous origin. In one male neurasthenic he observed once an attack of prolonged and irregular migraine (intense headache with febrile states), the clinical picture strongly suggesting meningitis, but spontaneous recovery ensued in the course of a few weeks. An iodoform salve was rubbed into the shaved head in the 5 cases on which the article is based. Quincke has also obtained good results with mercury.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

ELLIS'S DEMONSTRATIONS OF ANATOMY, Being a Guide to the Knowledge of the Human Body by Dissection. Twelfth Edition. Revised and Edited by C. Addison, M.D., B.S., F.R.C.S., Lecturer on Anatomy, Charing Cross Hospital, Medical School; Formerly Hunterian Professor, Royal College of Surgeons, England. Illustrated by 306 Engravings on Wood, of which 75 are in color. Cloth. Pp. 851. Price, $3.50 net. New York: William Wood & Co.

A COMPEND OF OBSTETRICS, Especially Adapted to the Use of Medical Students and Physicians. By H. G. Landis, A.M., M.D., late Professor of Obstetrics and Diseases of Women in Starling Medical College, Revised and Edited by W. H. Weels, M.D., Demonstrator of Clinical Obstetrics in the Jefferson Medical College, Philadelphia, etc. Eighth edition. Illustrated. Cloth. Pp. 227. Price, $1.00. Philadelphia: P. Blakiston's Son & Co., 1906.

A MANUAL AND ATLAS OF DISSECTION. By S. M. Yutzy, M.D., Instructor in Osteology and Demonstrator of Anatomy in the University of Michigan. With 314 Illustrations. With an Introduction by J. P. McMurrich, A.M., Ph.D., Professor of Anatomy, University of Michigan, Ann Arbor. Cloth. Pp. 256. Price, $2.50. Philadelphia: P. Blakiston's Son & Co., 1906.

LA CAMPANA CONTRA LA FIEBRE AMARILLI. Informes, Notas y Comentarios De Inspeccion. By Dr. Carlos Manuel Garcia. Medico Inspector Del III Distrito. Septiembre De 1903—Enero de 1906. Paper. Pp. 43. Veracruz: Tipografia "El Progresio" de Jose Ledesma, J. M. Betancourt, 32. 1906.

ATMOKAUSIS UND ZESTOKAUSIS Die Behandlung Mit Hochgespanntem Wasserdampf in der Gynaekologie. By Dr. Ludwig Pincus, Frauenarzt in Danzig. Zweite Verbesserte Auflage, Mit 33 Textfiguren und Tafeln. Paper. Pp. 371. Wiesbaden: Verlag Von J. F. Bergmann. 1906.

SKIASCOPY WITHOUT THE USE OF DRUGS. A Practical Treatise for Optometrists by R. M. Lockwood, Author of Principles of Optometry. The trial Case and How to Use It, etc. Illustrated. Paper. Pp. 112. New York: Frederick Boger Publishing Co.

DISEASES OF THE NERVOUS SYSTEM, Resulting from Accident and Injury. By. P. Bailey, A.M., M.D., Clinical Lecturer in Neurology, Columbia University, New York City, etc. Cloth. Pp. 627. Price, $5.00. New York: D. Appleton & Co., 1906.

TRANSACTIONS OF THE ELEVENTH ANNUAL MEETING OF THE AMERICAN LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL SOCIETY, held in Boston, Mass., June 5-7, 1905. Cloth. Pp. 570. St. Louis: Published by the Society. 1906.

THE DYNAMICS OF LIVING MATTER. By J. Loeb, Professor of Physiology in the University of California. Cloth. Pp. 233. Price, $3.00. New York: The MacMillan Company, 1906.

NINTH ANNUAL REPORT OF THE LOOMIS SANATORIUM AND ANNEX (for the Treatment of Tuberculosis). Paper. Pp. 56. Liberty, Sullivan County, New York, Oct. 31, 1905.

REPORT OF THE TRUSTEES OF THE NEWBERRY LIBRARY for the Year 1905. Paper. Pp. 30. Chicago: 1906.